

Gardenside Gossip

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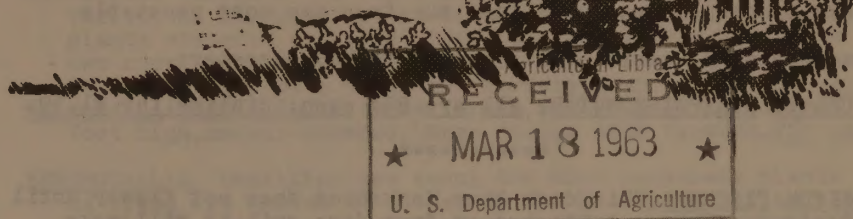
TEACH US DELIGHT IN SIMPLE THINGS.

Kipling, The Children's Song.

In the 1850s, there died in Vermont, in the town which was named for him, a man of whom a neighbor wrote, -"He was a member of Congress for a number of years. Then he was elected Governor of the State. Then a Senator of the United States, and the best part of it all was, he was a good farmer."

How different the estimate of his abilities seems from what would be said of him today. But stop and think, -was not the emphasis correctly placed after all? For in those days it was essential that a man produce the food his family needed. At 83, he recorded with pleasure that he had done all of his 'spring work' and made a garden as well. Two years later he died. For the most part, his pleasures would seem to have been 'simple things'.

This bond with the soil, which he so much enjoyed is as necessary to many of us today, as it was then, to him. Would not making a garden help you to endure the pressures of today?



VERONICA LONGIFOLIA SUBSESSILIS

More than twenty years ago, we said of this Speedwell as a comment under a picture, -"There is little dark blue in the fall garden, and this is most of it. It is fine enough to make up for a lot of other kinds of blue, though".

Veronica longifolia, or as it is now known, V. maritima, is to be found commonly in Europe, and has escaped in America so that it is fairly common in Vermont on damp deep soils. But this form is quite different, and comes from Japan. We were told by one authority that it was not known in the wild, and that it must be considered a horticultural variety entirely. It may possibly be a tetraploid, for its growth is stronger, and its foliage heavier than the type plant. In fact it may have stems of almost pencil thickness in good culture, and the two inch or longer leaves are of the darkest green, and clasp the stem firmly. It is a particularly exotic looking plant as it is starting into growth in spring and early summer. Then about August the spikes of dark blue flowers expand, sometimes to a foot in length. Often October frosts find still opening buds. Since flowering time is apt to be dry, extra water as buds show and a bit more food will help make the display. It may be cut and will open in water, and is an effective foil for early Chrysanthemums. Altogether, one of the finest hardy plants for the perennial border, quickly making a large clump, but never weedy or objectionable.

STRONG PLANTS, -60¢ each; 3 for \$1.50; 10 or more, 45¢ each.

Gentiana Acaulis Clusii

Again a plant about which authorities differ. While now said to be simply a form of the Gentianella, or Stemless Gentians of English gardens, it has on occasion been considered a separate species. It is definitely taller and larger flowered than acaulis.

We first grew this many years ago, the plants coming from Fred Borsch in Oregon. During the war years it was lost here, and not until last year did we again obtain it. Now we have large plants, which should flower well this first year. Likes a limy soil, a bit of shade, and a damp cool spot.

\$1.50 each.

The prices on our plants do not include delivery charges. Please add postage to your order, we will refund the excess. If you prefer we will ship by railway express. On Orders of \$5.00 or less add 10% handling.

HARDY PERENNIAL PLANTS.

Most of the plants we offer are grown here and are dug freshly for each order. However, we do have to purchase as our stocks become exhausted. We then buy from the most reputable sources. Many of these plants cannot be had elsewhere.

UNLESS OTHERWISE NOTED, all are 60¢ each; 3(alike) for \$1.50.

ACONITUM FISCHERI. This dark blue Monkshood does not flower until September. When established on damp deep soil, it will make a mass of 3' stems, topped with a foot long spike. 75¢ each.

ANEMONE JAPONICA, EARLY STRAIN. A very early flowering Japanese Anemone, with soft pink flowers on 3' stems in August.
A. HUPEHENSIS. This is lower in growth, and has bright pink flowers even earlier. Very hardy and makes a fine clump.

ASCLEPIAS TUBEROSA. Butterfly Weed will grow in any deep soil and brighten July and August with bright orange flower heads, flat, and on two foot stems.

CAMPANULA PERSICIFOLIA. Peachbells have stems to 30", with large single blue flowers in a foot long spike. Very hardy.
C. PERSICIFOLIA ALBA. A white flowered form of the preceding.

CHRYSANTHEMUM MAX. MARCONI. These double Shasta Daisies are from seed, but a very high percentage will be double this year. By far the largest double Shasta Daisy.

DELPHINIUM, PACIFIC HYBRIDS MIXED. The finest strain of Hybrid Larkspur in existence. Year old, field grown plants in a wide mixture of colors. 75¢ each.

DIANTHUS, JOHN BALL. A fine fragrant little Pink. The white blooms are doubled and have a bright red eye. Less than a foot high, and spicily fragrant. Known for over 100 years.

DICENTRA SPECTABILIS. Bleedingheart seems too well known to need description. Grows easily in any good soil, and is especially good in partial shade, as under Flowering Crabs. With extra water and food, it will flower all summer. 75¢ each.

DICTAMNUS ALBUS. The Gasplant or Fraxinella is an old time favorite. Permanent, but needs a year or two before doing its best. Fine foliage clumps, aromatic, and spikes of white flowers. May grow to 30". Fine young plants, two years old.
D. - RUBRA. The red flowered form, equally attractive. On sultry nights, while these plants are in flower, a gas given off by the flowers may be ignited with a match held below them.

DIGITALIS MERTONENSIS. We again have a small stock of plants of this truly perennial Foxglove. The flowers are large, and are a strawberry pink. Will grow to 5'. Lush dark green foliage.

EUPHORBIA EPITHYMOIDES. One of our favorites, and allied to the Poinsettia. Makes a foot high clump of red stained stems in early spring, topped with showy yellow bracts and blooms. For best results, cut down after flowering. New stems quickly.

FILIPENDULA HEXAPETALA FL. PL. Finely divided fernlike foliage close to the ground and a stem to a foot or more, topped with a round head of white flowers, like a cotton boll at a distance. Attractive at all seasons. Permanent. 60¢ each.
FILIPENDULA ULMARIA AUREA VARIEGATA. Known to us as Italian Spirea, this has foliage attractively mottled, in a basal clump. The tiny white flowers are in a terminal panicle. One of the better variegated foliage plants. 60¢ each.

WHERE DO YOU LIVE?

The heading of this column comes from something which happened to us last fall. While it is not really connected with the culture of plants, it may be of interest, and will in any case, lead to the thoughts we actually have in mind.

Not long after we started shipping out lily bulbs last fall, we received in the mail a returned package. On opening it, we found a sorry lot of bulbs, still in their plastic bags, but completely decomposed. The next mail brought a letter from the person to whom they had been sent, and one from another person as well. Both stated plainly what they thought of such bulbs as they had received, and in one case at least attempted to find a reason for the rotting, ascribing it to too tight packing and bulbs in too damp a condition. We have shipped lily bulbs as far as Argentina in such bags, and to Switzerland, and we use them in this country where they may not travel as fast by parcel post, as they do when sent abroad by Air. Shipment to Argentina was by boat, and was several weeks on the way.

Almost at once, we perceived a similarity in the two shipments, and when in a day or two, we had still a third complaint of poor condition on arrival, the pattern took shape. Since that time, two more reports have come in, - one quite recently. And they all come from the same general area, -- Minnesota, Idaho, North Dakota. The three states accounted for four of the five bad reports.

Beyond any question, these packages were all in the same mail pouch, on the same train, and quite possibly up against the same steam-pipe. In any case, they were heated in transit. We refilled the orders which we heard about in time, and still have to make good to North Dakota. All the replacements went thru perfectly. This is a case where the destination affected the condition of the plants on arrival. We have had others similar, but usually on spring shipments, travelling south. They leave here with our temperatures barely above freezing and are in summer, almost at once! Under such conditions, delay is fatal.

The plants we grow here thrive in our climate. Many of them do well much further south, or west, or even north. It must not be assumed that hardiness is a matter of resistance to cold. Oftentimes the reverse is also true. Heat and summer drought may so lower the resistance of a plant, that it will succumb to winter conditions much less severe than we have here.

Where do you live,--con.

The state of Vermont is not entirely in one single hardiness zone. The first such attempt to break the area up into such a classification, resulted in three distinct areas, one at the extreme south-eastern tip being 5. The central portion, and all of the Champlain Valley, in which we are, is 4. And the very northern part is 3. Perhaps you have seen such a zonal map, first published before 1940, and basing its areas on the average low temperatures in the area. It was early recognized that extra care and favorable location would permit plants to be grown in a zone above that usually specified. More recently, it has been noted that any area may have pockets, often of considerable size, which vary either way from the norm. Vermont is now so divided and when such a map is in color, it is really quite pretty!

Most of you will not be particularly interested in hardiness zones in Vermont. But are you aware that similar maps exist for most states, usually to be found at your State Agricultural College. One is often surprised to learn that,--quite apart from any influence of soils--it is possible to grow things from warmer areas than you may think you live in. Soil conditions should not be overlooked of course. We can easily illustrate both points by mentioning that Rhododendron maximum does grow in Vermont, naturally and despite the ideas of many. It grows in the central part of the state in a sub-zone, rather cooler than we have here. And it has recently been reported from the extreme north, an area definitely in zone 3. But it does not grow here in 4 at all native, nor under cultivation, except it is well cared for. In this case soil makes the difference. Consider then, that early settlers north of Boston, found the Magnolia growing wild in a limited area and eventually gave that name to their town. Normally they are found only many miles further south,--at least in nature.

We urge you therefore, to try plants that are not commonly found about you. Of course you will suffer losses, and disappointments. There may be those who will intimate that because certain plants are not common locally, or if wild ones, that they never grew here,--you may be somewhat queer. That isn't so at all. Ornamental horticulture is not actually the practice of growing the easy and common things. There are compensations of the spirit, as well as of the flesh. Personally, tho, we have never forgotten the expression on the face of a native Vermonter from the hills, who worked here one summer, when he reached up to pick his first tree-ripened peach, and then bit into it.

HARDY PERENNIAL PLANTS.

Gypsophila Bristol Fairy. Famous double Baby's-breath, with large flowers in huge heads, loosely above filmy foliage. Flowers from June on, and is fine for cutting or drying. 75¢
Gypsophila Perfecta. We saw a mature plant of this new double variety in bloom, and it is distinctly larger in flower. Our plants wintered well, the first year, and we now have fine own root stock, one year old, which will flower this summer. We hope it may be a permanent variety over winter. 75¢ each.
Gypsophila Rosy Veil. Quite different, as it grows at most a foot high, unless crowded. Large double pink flowers. 75¢ each.

Heemerocallis. Daylilies are among the most permanent plants we have, and are useful in shade, and for holding banks, as well as giving a profusion of flowers in summer. We have many new colors now, and a number of these have been added to our list. Field grown clumps, 60¢ each.

August Pioneer. A rather tall, August flowering chrome fellow.

Autumn Red. The name describes it well.

Hyperion. The very best waxy yellow sort. July-August. 4' tall.

J.A. Crawford. Apricot yellow, 4' tall, in July-August.

Linda. Bright golden yellow, 30" tall, in June and July.

Pink Charm. July flowering. Soft ochre-red in color. Popular.

Purple Waters. Wine purple, and more attractive than it sounds.

Soudan. Very tall pure yellow sort, in June and July.

Sunshine Song. A ruffled, chrome (soft) yellow sort.

Helianthemum. The Rock Roses are really tiny prostrate shrubs, mostly from the Mediterranean area, where they spread over the rocks in full sun, and in poor scanty soil. This gives a clue as to their best use,--in the Rockery. We once grew many named sorts, but gave them up, and were very glad to find a new source for them last year. FIELD PLANTS, 75¢ ea.

Ben Nevis. Yellow with brownish crimson center. All these sorts are single flowered unless noted, and flower from June on.

Brunette. Rusty red, with yellow center. Shear most Rock Roses after flowering, to keep them compact.

Buttercup. Clear golden yellow. These are actually evergreens.

Double Red. The name describes it, of course.

Double Yellow. And again, a descriptive name.

Jock Scott. Bright tomato red. Remember, all these are prostrate.

Mrs. Mould. We have no description. Be surprised.

Rose Glory. Bright rosy pink. All of these like limestone.

St. Marys. A very large white. Because of exposure, cover all of these sorts during winter, with evergreen boughs.

Tia. Apricot umber. A warm color. Never use leaves to cover.

Heuchera. The named Coral Bells are far preferable to seedlings since all plants are alike, and they can be used for mass effects with purity of color. If they are kept cut, these will flower nearly all summer, from mid-June on.

Garnet. Reddish pink. Large bells on a stem to some 15 inches.

Matin Bells. Similar to Garnet, but much deeper in color.

Oakington Jewel. A bright red-pink, taller and stronger.

Queen of Hearts. The best Coral Bell, with fine tall stems, large bells, and the brightest red color. \$1.00 each.

Hosta Honeybells. This new hybrid has the fragrance of the late flowering white parent, but is earlier and has larger lavender flowers on tall stems. Fine for sun or shade. 60¢ each

H. Langifolia Variegata. The variegated leaved Plantain Lily is a fine edging for shrub plantings, as it will grow in partial shade. Large leaves, striped and mottled white.

H. Plantaginea. Known for its large yellow green leaves, and the fragrant white flowers in September. Will grow in shade or sun. Strong plants, \$1.00 each.

GARDENERS ALL.

HARDY PERENNIAL PLANTS.

- IRIS CRISTATA. This American Iris grows about a foot high, and it will thrive in dry poor soil, so that we find it useful for holding low banks. Soft blue flowers in May.
- IRIS. The Crested, or German Iris are still among the most glorious of garden plants. Many new varieties appear yearly but as we are not specialists, we continue to grow a good selection of varieties in the major groups. All are tall.
- CITY OF LINCOLN. Gold standards, bright maroon falls.
- CORONATION. Brilliant deep clear golden yellow. 40" tall.
- DEEP VELVET. Blackish red purple, or midnight blue.
- DOG ROSE. Delicate soft pink, -to 50" tall.
- FRIEDA MOHR. Lilac pink standards, falls are darker. 42" tall.
- GUDRUN. A very large, pure white bloom.
- NARANJA. A stunning dark yellow self colored flower.
- PRAIRIE SUNSET. A tan-salmon blend, giving a sunset effect.
- SABLE. Deepest blue black violet, large and tall.
- SHARKSKIN. Very fine pure white, extremely large.
- THE RED DOUGLAS. Just about the best red. Orange beard.
- TIFFANY. An unusual yellow plicata, with purple stitching.
- WABASH. White standards and blue falls. Best bicolor.
- IRIS KAEMPFER. GOLD BOUND. These are Japanese Iris, different and later than the preceding. The best white. 75¢ each.
- IRIS, - MOUNT HOOD. Double dark blue, with orange center.
- LAVANDULA VERA, MUNSTED VARIETY. The true variety, dwarf, compact and very hardy. May be used for a clipped edging. Lavender is really a little shrub, but is treated as a flowering plant.
- LESPEDEZA THUNBERGI. We enjoy this strong growing plant in fall for its 3' tall stems are tipped with drooping racemes of rosy purple, bean-like flowers. Strong clumps, \$1.25 each.
- LOBELIA CARDINALIS. This native plant is easily cultivated, and tho commonly found in wet soils, it does not have to have such conditions. Any deep cool soil will produce its 30" tall stems, tipped with the brightest red flowers, ever.
- L. CARDINALIS ALBA. The white form is unusual. We obtain it from a friend in Central New York. \$1.00 each.
- PACHYSANDRA TERMINALIS. This evergreen plant is a valuable ground cover to use under evergreens and tall shrubs. It is entirely hardy here, but may burn if exposed, in winter.
- PAPAVER. Oriental Poppies are of easy culture in any deep light soil, and they give astounding color in June. Best dug for shipping when dormant in July, we will send at any time if requested to do so. Field grown plants, 2-yrs. old.
- BETTY ANN. Beautifully crinkled LaFrance pink, unspotted.
- CHEERIO. Clear shell pink with a bright red basal spot.
- JEANNE MAWSON. Very large and lovely peach pink.
- JOHN 3RD. Smaller, daintier, crinkled coral pink flower.
- MRS. PERRY. The old standby. Salmon pink, large and strong.
- ROSE BEAUTY. A true, rich rose pink.
- SPOTLESS. This is Mrs. Perry, without basal marking of any kind.
- WARLORD. Best of the dark reds, a deep clear color.
- PHLOX STOLONIFERA, BLUE RIDGE. This Phlox flowers in spring and early summer, later than the Moss Pinks. It has a habit like the strawberry, sending out runners which root down. The stems are but 3-4" high. Most sorts have a poor color, but this is a fine blue, in heavy clusters. 60¢ each.

As might be expected many letters reach us from people who, having read the Gossip, feel that they have material we might be interested in. And for the most part, we do find the material sent, to be of value. We like to know how plants grow in other spots. We like to know what interests other people. And often, too, we find articles in magazines which we feel we would like all our friends to see, since often they are not widely disseminated. Such an article, we now expect to make a part of this issue. It deals with the life story of Ferns. Permission to reprint it has been granted by the author, Dr. H. W. Rickett, Deputy Assistant Director of the New York Botanical Garden, and it appeared in the Garden Journal, published by that institution. Our thanks to them for their help.

Another article which we recently read we wish we could comment on at length, but must admit that it is almost beyond our comprehension, and we hope that many of you may have seen the issue of Reader's Digest which deals with science's present knowledge of inheritance. Once we tried to explain chromosomes and genes, and may have been moderately successful. But when we approach DNA, --that is not for us. Get the issue and read the article, if you can.

But on occasion, articles or letters come in for no logical reason whatever, and we have had them without signature or address. The one we have now, has no source, save a date, -1800- but it comes from a gentleman in New Jersey. A portion of it is so interesting, we thought you might like to see it.

Headed, "The Kamtschatence or Kamschatka Lily", it deals with what is not today considered to be a true Liliaceae. Hortus calls it a Fritillaria, and says it comes from Siberia. Not wishing to become involved in a botanical discussion, let us only say that years ago, Alaskan correspondants sent us bulbs that gave us quite similar flowers, but that were not permanent with us. We shall not print the botanical description either, but note only that it states, "there are eleven, all of them bulbous-rooted". We assume this means that eleven varieties, or sub-species are meant. It then continues, -

"All the species are propagated by sowing the seeds, and if care is taken to preserve these seeds from good flowers, very beautiful varieties are often produced. The roots of the white lily are emollient, maturating and suppurative, and are used externally in cataplasms for these purposes with success. The common form of applying them is boiled and bruised. Gerard recommends them internally against dropsies."

The Kamschatence or Kamschatka Lily, -con.

"The Kamschatence or Kamschatka lily, called there saranne, makes a principal part of the food of the Kamschatkans. Its roots are gathered by the women in August, dried in the sun and laid up for use. They are the best bread of the country and after being boiled are reduced to powder, and serve instead of flour in soup and several dishes. They are sometimes washed and eaten as potatoes, are extremely nourishing, and have a pleasant bitter taste. Our navigators boiled and ate them with their meat. The natives often parboil and beat it up with several sorts of berries, so as to form of it a very agreeable confection. Providentially it is a universal plant there, and all the grounds bloom with its flowers, during the season."

"Another happiness remarked there is that when Whitefish are scarce, the saranne is plentiful; and when there is a dearth of this, the rivers pour in their provisions with redoubled profusion. It is not to the women alone that the Kamschatkans are indebted for these roots. A species of mouse saves them a great deal of trouble. The saranne forms part of the winter provisions of the little animals. They not only gather them in the proper season, and lay them up in their magazines, but at times have the instinct of bringing them out in sunny weather to dry them lest they should decay. The natives search for the hoards; but with prudent tenderness leave part for the owner, being unwilling to suffer such useful creatures to perish."

This is but further evidence of the part that lilies play in life. As is well known they are portion of the food of both the Chinese and the Japanese. Not that it is unusual to eat the product of the soil, for of course it is not. But we are inclined to think of these beautiful flowering plants as ornaments for our gardens, rather than as vegetables, -or as herbs, as Gerard recommends. And that reminds us that last summer we heard about the "Whiskey Lilies" from a Pennsylvania friend. Next fall, we will try to tell you about them. In the meantime, do many of you know the story? We would like to hear, if you do.

Stories and articles about plants, or about some new or unusual form you may have observed are always welcome here. Many times they will not be as strange as the one we have quoted, and of course there will always be those who having read deeply or travelled widely will have heard them before. Every now and then word reaches us of some really unusual plant. And the preparation of this publication requires all the information we can assemble.

HARDY PERENNIAL PLANTS.

PHLOX SUBULATA, BLUE HILL. Still the best blue flowered Ground Phlox or Moss Pink. Good deep color, strong growing.
P.-BRILLIANT. A strong growing, very bright pink form.
P.-PERDUE'S PURITY. A small, low growing, very pure white form.
P.-RED. This is the usual strong growing dark pink form.
P.-WHITE. The white form, commonly sold. Strong growing.

PHLOX DECUSSATA. Garden forms of the Panicked Phlox are among the finest midsummer flowers for our gardens.
BRIGADIER. Bright red, or holly red, with darker eye.
CHARLES CURTIS. Sunset red and does not fade. Huge heads.
ELIZABETH ARDEN. Not tall, to 30" with huge florets of a soft lilac pink with cerise eye. A pastel triumph.
MARIE LOUISE. In our opinion the very best white to date.
PROGRESS. Soft lavender blue with darker eye. The best blue.
PRIME MINISTER. White, lightly suffused red. Bright red eye.
SIR JOHN FALSTAFF. A giant in size and a rich salmon pink color.
TURANDOT. Deep rose red. An even bright shade.

PLATYCODON MARIESII. The Chinese Balloon Flowers are fine in the garden, as they are permanent and flower late in summer. This one is seldom over 30" high and has single dark blue flowers.
P.-PINK. A pink flowered form, veined with darker pink.
P.-WHITE. A pure white form, sometimes striped with blue.

POTENTILLA TOMMASSINIANUS. This grey foliaged plant will carpet dry soils in full sun. It flowers with the Moss Pinks, in May and will be a sheet of soft yellow every morning. The strong sods we ship at \$1.00 each, should be divided and reset.

PRIMULA POLYANTHUS. The Polyanthus are loved for their cheerful early spring flowering. A fine strain of our own growing.
P.-ELLEN CARDER STRAIN. These have become famous for their fine range of colors, and their strength of growth. Unsurpassed by any presently available strain. Mixed only. 65¢ each.

PYRETHRUM. The Painted Daisies have long been a specialty here and we have about the only collection in the country. They are more difficult to ship in spring, and we prefer fall, but many demands come to us, so that we offer for May shipment. Give them full sun and a deep cool soil. Cut back after they finish flowering to start new attractive growth, and give them extra water to help thru summer's heat. Divide regularly.
BETTY. Double lavender pink, lighter at center. Late. \$1.00 each.
BUCKEYE. Dbl. dark reddish pink, with lighter center. \$1.00 each.
CHERRY GLOW. Dbl. A lighter Buckeye in color, and easier. \$1.00 each.
DAINTY. Very double dark red flower. Small, but choice. \$1.00 each.
GALT BEAUTY. Very large fully double light rose pink. \$1.00 each.
GALT GIANT. One huge single bright red flower per stem. 60¢ each.
HELEN. Double soft rose pink. The standard of quality in this group of plants. Easy culture, fine stem, perfect flower. \$1.00.
HUNTINGTON'S SCARLET. Single dark red flowers. Dainty. 60¢ each.
JEAN. Deep rose outer, slightly lighter center. \$1.00 each.
LADY PHYLIS. Like a larger Rose Mist. Branching stem. \$1.00 each.
LILLIE MORGAN. Partly double white, stems much branched. \$1.00 ea.
LOUISE. Double. Resembles Helen, but center is white. \$1.00 each.
MRS. BECKWITH. The best double white. Early. Fine for cutting. \$1.00
OLD ROSE. Deep rose pink, not red. Tufted, well filled center. \$1.00
POINSETTIA RED. A deep red, with a curled center. \$1.00 each.
RED PYGMY. An unusual plant, which grows less than a foot high in a dense mound. Single red flowers on short stems. 60¢ each.
ROSE MIST. Very double deep rose, approaching red. \$1.00 each.
SEASHELL. A very delicate and lovely soft shell pink. Grows well and is permanent. Well branched stems. \$1.00 each.

HARDY PERENNIAL PLANTS.

SALVIA BERTOLONII. The one western Sage that we have found to be hardy here. Coarse dark green leaves in a basal clump. The stems to about 2', dark purple flowers in late midsummer. 60¢

SCABIOSA CONSTANCY. This perennial Scabious is hardy and persistent. Dark blue flowers all summer if given extra water and food, and the faded blooms cut out. \$1.00 each.

STOKESIA CYANEA, BLUE DANUBE. A soft blue form of Stoke's Aster which grows to about one foot, and flowers most of the summer.
S. - SILVER MOON. An attractive pure white form. Both are hardy.

THYMUS SERPYLLUM ALBUS. This is the very prostrate Thyme, so often used for carpeting poor dry soils, and between paving stones on terraces. We sell large sods for dividing, rather than individual plants, at \$1.00 each. This one is white fl'd.
T. - COCCINEUS. The same, with tiny dark red flowers. Darker foliage.
T. - LANUGINOSUS. Woolly Thyme. Attractive low mounds of soft grey foliage. Not good for terraces, but carpets well.

TUNICA SAXIFRAGA ROSEA FL. PL. This little relative of the Pinks almost entirely prostrate and with stems about 8" long, isn't as big as its name. But the flowers are very double and a good bright pink. Best of all, it flowers continuously. 60¢ ea.

VERONICA, ICICLE. This white flowered Speedwell grows about 2' high and is lovely in midsummer, so cool in color. Light green foliage helps, and it makes a fine clump, not too tall.
V. MINUET. Quite prostrate, but foot high flower stems. Bright pink spikes over attractive leathery green foliage in summer.

VIOLA MAGGIE MOTT. Grown for more than one hundred years in England, this is the loveliest of the Bedding Violas. The soft lavender flowers are like pansies, and are fragrant. They flower over a long period and are truly perennial. But for best results this variety should be cut back and divided in summer. Given a little shade and water, they will grow to be of good size and again delight you next spring. Wonderful as a cover for Tulips, or when massed nearby.

V. ROYAL PURPLE. This variety originated in Canada many years ago. It is quite similar to the preceding, but is stronger and withstands hot weather much better. A plant will, if given the room, become two feet across and a foot high in onesummer and with us will flower continuously. But for best results, they too should be divided regularly each year. A very dark blue purple flower, somewhat less round than that of Mott.

V. ODORATA, ROSINA. This is the true Fragrant Violet, and in a good rose pink color, the only one of its kind. Flowers profusely in spring and often again in late summer.

HARDY GARDEN LILIES.

We do not favor spring planting of the Hardy Lilies, which we grow in so many species and varieties, feeling that they do not have time to become established and thus give a good reward for their cost. We offer them instead in the August issue of GARDENSIDE GOSSIP, which will be mailed you.

However, last fall we did not have room in prepared beds to plant back some quantity of good sized bulbs of our colored SHELburne Hybrid TRUMPETS, which are of Regal Lily type, but which flower in mid-July. These were stored and are available for shipment at any time, -the earlier the better.

YELLOW TRUMPETS. \$1.00 each; 5 for \$4.50.
PINK TRUMPETS. \$1.00 each; 5 for \$4.50; 25 or more for 80¢ ea.

THE CULTIVATION OF NATIVE ORCHIDS.

During the past year, there came into our hands a copy of an article bearing this title, which was originally published in Garden and Forest, in 1891. The writer has long since died, but as he introduced us to these lovely wildflowers, his memory remains green. At first, we expected to print it all, but as much of it does not deal with those most cultivated, we have decided to quote from it, and to comment. It begins as follows.

"The hardy native Orchids as a class, are not as easily grown as most other wild flowers. Almost all of them grow in situations and conditions quite unlike those offered by an ordinary garden. Many of them in fact the majority, are bog plants, and when transplanted into an unmodified garden soil, even tho they may flower for one season, do not acquire strength for a second year, and soon die. Those which do not grow on bogs often grow where the conditions are similar to those of a bog, and some of these will flourish in soil which though not wet, never becomes perfectly dry.

The Cypripediums or Lady Slippers are perhaps the most desirable of the family, and, except C. acaule, are the easiest to manage. If not planted in a bog, they need a specially prepared soil, and to give them this, good drainage, shade, and plenty of peat or leaf-mold are necessary. Let it be well and deeply mixed into the soil. For C. spectabile, which is the queen of Lady Slippers, and also for the little Ram's Head Lady Slipper (C. arietinum), it is quite important that the roots do not come in contact with a sandy or gravelly soil, as this seems not to agree with them. Therefore when planting in such soils, in addition to the peat already mixed in, enough of the pure peat should be used to surround the roots. The two yellow Cypripediums--C. pubescens and C. parviflorum--are the least particular about their location; but even they delight in the leaf mold, and will do enough better to pay for applying it. There seems to be considerable difficulty in establishing C. acaule in cultivation, though the soil selected for it may be almost exactly like that in which it was found growing wild."

In this connection, we now know that this Lady Slipper requires a fungus growth which supplies nutrients to the roots, which they alone cannot obtain. He then adds that while C. acaule is often found in bogs, it is more frequently found on higher ground, especially in Pine woods. A further note says, "Mr. Edward Gillett has had the best success in growing it when mulched with Pine needles."

The Cultivation of Native Orchids,--con.

The next paragraph notes several of the *Habenarias* which are not of garden interest, but also names those we offer, except *H. ciliaris*, and adds,--"have flourished on higher ground than their natural habitat in soils that were prepared for them. Artificial bogs seem the most natural place for them in cultivation, but it is not necessary to discard them entirely if no bog is to be had." He then continues.

"*Calopogon pulchellus*, a natural bog plant usually growing with *Pogonia ophioglossoides*, is frequently found on upland in wet or moist sand, and may be grown in garden soil, if treated like the *Habenarias*. But *Pogonia* and *Arethusa* do not flourish except in bogs."

"The delicate and charming little *Calypso* planted in moist dark soil in autumn, and protected during winter with a few leaves, will come out thrifty in the spring and bear perfect flowers. After the flowering season is past, however, during its dormant season, which is from early June until the middle of October, comes the most critical time for this plant. The cool and dark Cedar swamps where it is found in New England, afford during the summer months just such surroundings as the bulbs need, surroundings not easily copied in a garden. But I believe if the right mulch is applied one which will protect it from the heat and keep it always moist, and then removed at the time the fall growth begins, even this may be grown and flowered more than one season in a cool nook of the garden."

In the more than seventy years that have passed since these words were first printed, we have learned much about the needs of the hardy Orchids. Much that is said about these needs is still as true as ever. Peat is an essential for most, and if used with reasonable care, is a very satisfactory medium. As an example, we grow *Cymbidiums* for cut flowers, in our greenhouses. After trying various recommended mediums, we tried Peat Moss along with ample drainage,--with entirely satisfactory results. If it is used alone in garden beds as is done, be certain that it does become thoroughly wet thru after planting. And also, be sure that there is drainage, so that you have not made a little bog. For none of these plants actually grow in bogs. They grow above them, with the roots in muck oftentimes, but the plant crown above the permanently wet area. And of course a few do not grow in bogs at all.

HARDY NATIVE ORCHIDS.

The native Orchids are mostly plants of swamps and wet meadows, and are not generally cultivated because their needs are not known. We find that for the most part they do quite well in damp shade, associated with ferns and other woodland plants not too rampant. The addition of a good quantity of Peat Moss is a help, and some of the more difficult can be grown in beds entirely of moss, or with rotted wood added.

CALOPOGON PULCHELLUS. Grass Pink. Common in sphagnum bogs. To a foot of height, attractive pink flower on a slender stem. Not too difficult in damp shade. 75¢ each.

CALYPSO BOREALIS. We offer this extremely rare Orchid, from a western source, for delivery in midsummer, and subject to possible failure to obtain. Formerly moderately common in Vermont, we know at present of but one well hidden wild colony, and have not ourselves seen the plant in the wild, for nearly forty years. We know that it likes rotted wood, and is apt to be growing in the moss on top of a fallen log, or an old stump, in damp shade. Our supplier is offering a good quantity, if at all, and wishes us to keep the price moderate, so that buyers may attempt to re-establish it in the wild, rather than to flower it in the garden, altho the little bulb will usually flower once. We will gladly advise further. \$1.00 each; 5 for \$4.00.

CYPRIPEDIUM ACAULE. Moccasin Flower. Bright pink 'slippers' on a bare stem, above two attractive leaves. 75¢ per bud.

C.- ALBUM. The rare white, or occasionally blush pink form of the preceding. \$2.50 per strong bud.

C. ARIETINUM. Ram's Head Lady Slipper. A single greenish brown, crimson, and white flower of odd shape, on a foot high stem. Found in moist rocky woodland. \$2.50 each per strong bud.

C. CANDIDUM. White Ladyslipper. Found mainly in marl swamps this is more common westward. We still have a fine lot of nursery grown plants at \$1.50 each per strong bud.

C. PARVIFLORUM. Smaller Yellow Ladyslipper. Tiny bright yellow sac, and deep brown sepals. Easy in damp shade. 75¢ per bud.

C. PUBESCENS. Larger Yellow Ladyslipper. Lighter in color and twice as large as the preceding. Easy in open woodland, but not under pines, also found in swamps. 75¢ per bud.

C. SPECTABILE (REGINAE). Showy Ladyslipper. Will grow to 2' or more in damp cool soils in shade. Avoid wet feet. Striking foliage and pink and white sac-like flowers, two inches or more long. Finest native orchid. \$1.00 per strong bud.

EPIPACTIS PUBESCENS. Rattlesnake Plantain. Found in open woodland, often in colonies, the green foliage variegated with white. White flowers in a small spike. 75¢ each.

HABENARIA CILIARIS. Yellow Fringe-Orchid. Lovely and fragrant in part shade and sandy soil. Bright orange flowers in a tight spike on a foot high stem. From Carolina. 75¢ per bud.

H. FIMBRIATA. Large Purple-Fringe Orchid. Found in wet grassy meadows in the open, and may grow to 30". Fragrant spike of rich purple flowers in July. 75¢ per strong bud.

H. PSYCODES. Small Purple-Fringe Orchid. From grassy bogs and meadows, often in part shade. Like the preceding but smaller. Easy in damp shaded soil. 75¢ per strong bud.

NATIVE FERNS.

With but few exceptions, our native Ferns are found in shade making them useful for planting such areas about the home. But they are interesting in themselves, and may be used as specimens in the Rockery or the Border. Generally of easy culture in any moderately damp soil, a few preferring dryer conditions.

ALL AT 50¢ EACH; 10 FOR \$4.50; -EXCEPT AS NOTED.

ADIANTUM PEDATUM. Slender brown-black stems, to 18", and a spreading head of small round pinnules. Likes damp shade.

ASPIDIUM BOOTTII. A rare Shield Fern, delicate and partly evergreen, growing to 3', from shaded swamps, but easy in damp soil.

A. CRISTATUM. One of our handsomest evergreen ferns, to 2', very sturdy and rich looking. From moist woodland, partial shade.

A. - CLINTONIANUM. Clinton's Wood Fern is similar, but in every way larger. Rare. But easily cultivated.

A. FILIX-MAS. Male Fern. Resembles the Marginal Fern, but is not evergreen. Very rare, in comparison to other Shield Ferns. \$1.

A. GOLDIANUM. Magnificent. Largest of Wood Ferns. To 4' and a foot wide frond. Easily cultivated in shade. \$1.00 each.

A. MARGINALE. Evergreen Wood Fern, of easy culture. To 3', but is usually less. For Rockery, or any shaded spot.

A. NOVEBORACENSE. New York Fern. Common in rather dry woodland. Odorous when crushed. Fronds taper each way from center.

A. SPINULOSUM. Toothed Wood Fern. Evergreen. Grows to about 30" and is of easy culture, anywhere in shade. Filmy foliage.

A. - DILATATUM. A form of the preceding from higher elevations. One of the loveliest, but needs a cool spot in shade. \$1.00

A. THELYPTERIS. Marsh Fern. Despite its name, will grow in dry soil if shaded, or in full sun if damp.

ASPLENIUM ACROSTICHOIDES. The Silvery Spleenwort also tapers each way from the center, but less markedly than the New York Fern. A beautiful filmy sort from rich woods and moist banks.

A. ANGUSTIFOLIUM. Narrow-leaved Spleenwort. A rare and beautiful fern, to 4' if on rich woodland banks, with moisture. Different.

A. FILIX-FEMINA. The Lady Fern is extremely variable. It is common to open woodland, easily cultivated. Lacy and delicate.

A. PLATYNEURON. Ebony Spleenwort is a small, rigidly upright fern to 18" at most. Dark stems, with inch long pinnae. It is to be found on moist banks, or shaded ledges. For Rockery.

A. TRICHOMANES. The Maidenhair Spleenwort is a tiny gem for the Rockery. A tuft of dark stems, with rounded pinnae, to 8" at most. In dense shade, on dry ledges, but grows well in soil.

CAMPOTOSORUS RHIZOPHYLLUS. Walking-leaf Fern is one of the best for the shaded rockery. Evergreen fronds are tapering, and the tip roots down to form a new plant. It carpets limestone boulders and ledges, in dense shade. Never common. 75¢ each.

CYSTOPTERIS BULBIFERA. Bulblet Bladder Ferns usually grow in crevices of ledges, in partial shade. Always drooping, but fine and graceful it grows readily in damp soil. Increases from the bulblets, which drop from the stems, and take root.

C. FRAGILIS. Common Bladder Fern. Earliest to start growth in spring, and like the preceding often disappears in August. It may then start again, with fall rains. Smaller. Damp soil.

DICKSONIA PUNCTILOBULA. Hayscented Fern. Common to open upland fields, a very attractive filmy sort. It is useful for holding dry banks in sun or shade. Fragrant when drying.

LIFE STORY OF A FERN

FEW PERSONS other than botanists with microscopes have ever seen the individual spores of ferns. So unfamiliar are they that many curious legends were built up around these "seeds" in the past. Their magical properties, it was told, might even render their lucky owner invisible; he assuredly never thought of using them to raise new ferns. Yet this is the sole function of the dust-like particles that are scattered almost invisibly into the air from the leaves. Actually a fern has no true flowers, fruits, or seeds. These minute spores are its reproductive bodies.

In temperate countries ferns are composed mainly of green leaves, often large and divided into hundreds of segments; they grow from small stems at or beneath the surface of the ground. Some have a short thick stem more or less erect in the soil but never projecting much above it. The stem of others kinds is slender and extends horizontally. As it grows at the tip the opposite end may die, so that the whole fern creeps, so to speak, through the soil. A creeping stem may fork, the two branches diverging and eventually becoming separated by the death of the older parts. The result is comparable to the natural production of new strawberry plants by runners.

The leaves of many ferns have similar methods of propagation. One kind has leaves that taper to a fine point, from which, when it touches the ground, a new plant springs. Other kinds form minute buds on their leaves; these fall to the ground and continue growth independently of the parent. A few form new plants on their roots. All these are considered methods of vegetative propagation, not strictly comparable to the formation of new plants from seed.

Ferns do, however, reproduce also in a less casual and more specialized manner that may be likened to the production of flowers by a flowering plant or cones by a conifer. If you examine a leaf, or frond, as it is often called, well along in the growing season, you will probably find on the lower side of some of its segments small brown or orange spots, rough or scale-like in appearance, usually fairly uniform in size, shape, and arrangement. These are the normal reproductive structures formed by the leaves, filling the place of flowers in the fern's economy. They are commonly known as fruit-dots, or, more technically, *sori* (singular, *sorus*).

Life story of a Fern, - con.

To penetrate the secrets of the life cycle of a fern, it is necessary to use a microscope. If you use a hand lens on a sorus, you may be able to see that it is composed of several hundred globular brownish bodies attached to slender stalks that project from the under surface of the leaf. These are spore-cases, which in many ferns are concealed beneath a small and characteristic scale which grows over them from one side or which protects them like a minute umbrella or which almost completely encloses them like a sack. So characteristic are the size, shape, arrangement, and covering of the sori that they are much used in classifying and identifying ferns.

Several spore-cases may easily be removed from a sorus with a dissecting needle and studied with a more powerful microscope. Those that appear opaque obviously contain some fairly solid matter. Beginning near the point where the stalk is attached to the spore-case and extending up the side and over the top is a raised ridge something like the crest on an ancient helmet, golden-yellow or orange in color. When mature this crest dries, and as it dries it straightens, tearing apart the walls of the sack to which it is attached and spilling into the air a number of minute particles which were within. These are the spores. After a while the crest may curl again to its former shape, often so violently as to throw out any remaining spores that may adhere to the torn walls of the spore-case. The empty spore-case remains attached to the leaf and appears transparent.

The spores, dust-like particles set free in the air about a fern frond, are distinguished from true seeds by their small size and by their lack of differentiated parts. No embryo plant may be found within a spore. Each, however, bears the living matter that can eventually grow into a fern plant with its characteristic parts. A fern leaf may produce several millions of these bodies, each potentially a new fern. They float easily in the air and are dispersed by the slightest breeze. If all were to live and grow, we should soon be fighting our way through a jungle reminiscent of the vegetation of the earth millions of years ago. Since the surface of the globe is already well occupied, most of the spores must die. Their chance of survival depends on finding a vacant millimeter or so of moist soil or rock crevice where the temperature is moderate and the sun's rays do not strike. In such a fern Utopia the spore rapidly enlarges and begins to take on the characters of a mature fern plant.

At this point the observer meets his greatest surprise. The new plant that develops from a spore is surely a fern, since its parent was a fern; but it does not look like one. Even when mature it has no leaves, no stems or roots. It is a small, delicate, dark green object, resembling most a minute

NATIVE FERNS.

LYGODIUM PALMATUM. Hartford or Climbing Fern. This rare fern is now found in one location in Vermont. We obtain it from another section. May grow to 4', the slender stem will wind thru small shrubs, and we have seen it trained on rough cord. Different, and attractive, in partial shade. \$1.00 each.

ONOCLEA STRUTHIOPTERIS. Ostrich Fern. One of the best of the larger, rather coarse ferns. Its fronds grow to 4', in a regular vase shape. Found on river banks, in damp soils with partial shade. Useful about the home, and of easy culture.

OSMUNDA CINNAMOMEA. The Osmundas are ferns of swamps and wet woodland, often growing to 6'. Not as tall on dry soils, all thrive in partial shade about the home. 50¢ each.

O. CLAYTONIANA. The Interrupted Fern is much like the Cinnamon save that its fruiting pinnae are at the center of a frond and wither early, giving the plant its name. Easy. 50¢ each.

O. REGALIS. Royal Fern. This differs markedly from the preceding, and is hard to describe. It is best to say that when one has seen a clump of this fern at home in damp swamp soil, the reason for the name is apparent. It grows easily in shade, but needs extra water to attain the 6' seen in nature under the best conditions. 50¢ each.

PELLAEA ATROPURPUREA. Found on limestone ledges or stony soil in full sun, and dry conditions, the Purple Cliff Brake will grow in a limy soil, and be very beautiful as a Rockery plant.

PHLEOPTERIS DRYOPTERIS. Oak Fern. Charming small fern, to 8" high and 7" broad, delicate yellow green. Easy in shade.

P. HEXAGONOPTERA. Broad Beech Fern. Not common, with a triangular frond, 7-12" wide at the base. Dry open woods, -light shade.

P. POLYPODIOIDES. Long Beech Fern. Common in open woodland and shaded banks. Grows to a foot, and makes a strong colony, but is not weedy. And it is very green, -no other color.

POLYPODIUM VULGARE. A common little fern, the Polypody will quickly and easily carpet ledges and boulders in light shade.

POLYSTICHUM ACROSTICHOIDES. The Christmas Fern is evergreen, and is common in fairly moist soil, in shade. It may grow to 3', and makes a good sized clump of attractive dark green.

P. BRAUNII. Brauns Holly Fern. The most beautiful native fern. It comes from cool woods at high elevations, but will grow well in partial shade, with extra moisture, especially if among rocks. The sturdy dark green fronds are often 2' long, and chaffy with brownish scales. Evergreen. \$1.00 each.

SCOLOPENDRIUM VULGARE, CRESTED FORMS. We do not now have any of the type of Hart's Tongue Fern that is wild in America, but we do manage to keep a small number of plants of the varied European forms. Grown in pots and may be withdrawn at any time. Moderately hardy. \$1.00 each.

WOODSIA ILVENSIS. Rusty Woodsia. One of the better small ferns for sun and dry locations. Will stand slight shade. It is a tuft of short fronds, 6-10" tall, covered with a rusty bristle-like chaff. May often become a sod, a foot across.

W. OBTUSA. Blunt-lobed Woodsia. More slender and longer than the preceding. Found on rocky banks and cliffs, in rather more shade. Attractive and easy, for the Rockery.

FERN NOMENCLATURE. We are well aware that nearly all Ferns have a number of different names, depending on whichever authority is consulted. For convenience, we use the one we first learned and you may disagree if you wish. Under any name, the plant is the same one.

NATIVE PLANTS.

The hardy perennial plants of our fields and woods are very useful for the shaded garden, and many of them are collectors items as well. We do not grow them in cultivation, and none are kept in stock. YOU MUST PLACE ORDERS IN ADVANCE, IF YOU WISH TO PICK THEM UP HERE. And as well, a reasonable time must be allowed to permit us to assemble mail shipments.

ALL NATIVE PLANTS ARE 60¢ EACH; five or more, like, for 50¢ each.
Except as noted.

ACTAEA ALBA. The White Baneberry grows about 30" high. Best in shade, as foliage is better. Fuzzy white flowers; white berries.
A. - RUBRA. Differs only in having bright red berries.

ANEMONE CANADENSIS. The Windflower often covers damp spots with attractive foliage, 2' high. Large white flowers in late May.
A. QUINQUEFOLIA. The Wood Anemone grows only a few inches high, but has most attractive white or pinkish flowers, in shade.

ANEMONELLA THALICTROIDES. The Rue Anemone, tho similar to the Wood Anemone, bears its flowers in clusters. To 6" tall.

AQUILEGIA CANADENSIS. Columbine. Bright red flowers in May. The plant will carpet rocky ledges here. May be 2' high.

ARISAEMA TRIPHYLLUM. Jack-in-the-Pulpit. Lush green plant. Shade.

ASARUM CANADENSE. Wild Ginger. Excellent ground cover in shade. Large round green leaves, above prostrate stems.

CALLA PALUSTRIS. Wild Calla, or Water Arum. Trailing plant, native to bogs. White flower. Use in pond margins and wet places.

CALTHA PALUSTRIS. Marsh Marigold, or locally, Cowslip. This plant will carpet wet meadows in May with a sheet of gold. The strong green attractive foliage is often boiled and eaten.

CAMPANULA ROTUNDIFOLIA. Harebell. Tiny blue bells on slender stems almost all summer. Rocky ledges, in sun or light shade.

CHIMAPHILA UMBELLATA. Pipsissiwa. Small evergreen plant for shade. Attractive foliage topped by umbels of pink bells.

CHIOGENES HISPIDULA. Creeping Snowberry. Evergreen creeping plant with tiny white berries. Damp peaty soils, or sphagnum bogs.

CLINTONIA BOREALIS. Blue-bead. Common in mossy woodlands. Large, soft soft green leaves, yellow flowers, and blue, beadlike fruits.

CORNUS CANADENSIS. Bunchberry. This little Dogwood stands 6-9" high, and often carpets partly shaded areas in acid soil. It has large white, typical flowers, and bright red berries.

EPIGEA REPENS. Arbutus. We can supply in small collected sods. They do require a satisfactory soil and extra care. \$1.00

EUPATORIUM RUGOSUM. White Snakeroot. From open woodland. Not at all weedy, with fine heads of white flowers in August. 3'.

Life story of a Fern, - con.

and rather formless leaf with crinkled edges. It may, with luck, live for several years, and, if carefully cultivated by a well-disposed botanist, may reach a diameter of an inch or two; but that is all. It never attains anything that the ordinary observer would think of as fernhood. To distinguish it from its more imposing parent it is known as a *prothallus* (or *prothallium*). Under certain conditions it may become heart-shaped or even butterfly-shaped; if crowded, as it usually is, it is likely to be irregular. It may lie flat on its substratum, anchored by minute white hairs which grow from its under side. Or, if it grows in a cave where light enters only from one side, it may stand nearly erect on one edge, facing the light. Prothalli are not easily found in nature, but occasionally carpet a moist ledge or the floor of a cave with a dark green, moss-like growth.

As they differ from the parent plant in size and shape, so they differ also in their manner of creating a new generation. On the lower surface of the prothallus, projecting into the film of water that separates it from the substratum, are two kinds of reproductive structures. One kind is dome-shaped. At maturity a lid opens and through the opening many minute objects are expelled into the film of water. Each of these is shaped like a coiled spring. Near one end are attached many extremely delicate hairs which vibrate and lash the surrounding fluid, thus imparting to the coiled body a characteristic rapid, tumbling motion. When observed in a microscope, a prothallus may be seen to be surrounded by a swarm of these tiny swimming creatures, resembling water insects rather than anything related to a fern. They are named *gametes*.

The other reproductive structure is a sort of flask with an open neck which projects downward into the water. Of the thousands of swimming gametes that may be present near the prothallus, a few may chance to pass near the mouth of one of these flasks; these respond to some substance emitted from its interior, swim towards it, and enter the opening. At the base of the neck is a chamber which contains a single gamete of a different sort—a comparatively large and immobile body. When one of the swimming gametes reaches this, the two unite and become what is called a *zygote*. This is the beginning of a new fern plant, a living structure capable of growth to maturity and soon recognizable as a fern of the familiar type. The prothallus has thus produced a new generation, not by spores, not in any way that recalls the manner of reproduction of its parent, but in a highly intricate and specialized manner of its own.

Several weeks after the union of the gametes, the student may observe a tiny hair-like root extending from the prothallus into the substratum. This is not a root of the prothal-

Life story of a Fern, - con.

lus, which never has one, but belongs to the new plant; it is one of the first visible results of the growth of the zygote. Soon afterwards a small leaf uncoils from the same spot; then another, a series of them, each a little larger than its predecessor, each a little more like a characteristic fern frond. Finally, after many months, a stem begins its slow and inconspicuous advance into the soil, and develops its crown of fronds. The prothallus withers and dies, having produced its single offspring. A new fern has been formed, a fern like that with which we began this history.

To sum up this remarkable series of events, a fern is not one kind of plant but two. The more familiar plant is known to botanists as the spore-forming plant, or *sporophyte*. Any spore that it forms is capable of growing into an inconspicuous gamete-bearing prothallus, known as the *gametophyte*. This in turn through the activity of its gametes gives rise to a new sporophyte. The two types of fern alternate in the life cycle. Parent and offspring differ in size, structure, and method of reproduction. Heredity in ferns means that the characteristics of the parent are never exhibited by the immediate offspring!

This very elaboration of the life cycle has been a factor in the downfall of the ferns and the rise of the flowering plants. For one prothallus millions of spores are formed and scattered by the wind to fall mostly in places unfit for their development. The prothallus is a fragile thing, easily destroyed by even temporary drought. To form one zygote hundreds of swimming gametes must be released from their domes, for most of them fail to find the other kind of gamete. Finally the zygote must slowly grow from its small beginning, exposed from the first to dangerous variations in temperature, light, and moisture.

The flowering plant compresses all this sequence into the formation of its seeds, concealed within the fruits. When the seed is liberated, a small plant, carefully wrapped and well rationed with reserve food, is already formed and ready to continue its growth under the proper conditions—or to remain dormant but living through improper conditions. It is small wonder that growers of ferns are only occasionally concerned with spores, prothallus, and gametes, but rely more often on the separation of the underground stems and other methods of vegetative propagation.

NATIVE PLANTS.

GAULTHERIA PROCUMBENS. Wintergreen. Esteemed as a ground cover, and for its aromatic leaves and berries. 3-5" high. Sods.

GENTIANA ANDREWSI. Closed or Bottle Gentian. Usually in damp and partly shaded areas, but thrives in cultivation. Dark blue.

HEPATICA TRILOBA. Hepatica or Liverwort. From open rocky woodland. Blue, pink, or white flowers in profusion in April-May.

LINNAEA BOREALIS. Twinflower, sometimes called Deer Vine, is a trailing evergreen vine, thriving in peaty soil. Pink flowers are fragrant, and fruit is yellow. Moist woods and cold bogs.

MAIANTHEMUM CANADENSE. Canada Mayflower grows in moist woodland and carpets large areas. A tuft of spotted berries in fall.

MEDEOLA VIRGINICA. Cucumber Root. Stem to a foot of height, topped with attractive foliage, and yellow white flowers. Purple fruit.

MITCHELLA REPENS. Partridge Berries often thrive in cultivation, liking partial shade and a moist soil, not too rich.

MITELLA DIPHYLLA. Bishop's Cap. Fine for foliage and white flowers. Rapidly covers large areas in partial shade. To one foot.

PANAX QUINQUEFOLIUM. Ginseng. The aromatic root once used in medicine. Plant, a foot or more tall, good foliage, flowers and berries.

POLYGALA PAUCIFOLIA. Fringed Polygala thrives in open woodland and carpets large areas. Very attractive in May, when its purple flowers appear in profusion. Nice foliage too. Strong sods sent.

PYROLA ELLIPTICA. Shinleaf. Two rounded leaves frowning out of rotted Hemlock needles. Low spike of fragrant pink bells.

SANGUINARIA CANADENSIS. Bloodroot grows easily in the garden. The large white flowers in May, are above attractive bluish leaves.

SARRACENIA PURPUREA. Pitcher Plant comes from deep sphagnum bogs but can be grown in damp shaded soil. Also in edge of pool.

SAXIFRAGA CANADENSIS. This Saxifrage carpets ledges with white in May. Easy in full sun, but may need water in late summer.

TIARELLA CORDIFOLIA. Foam-flower. Like Mitella it quickly carpets shaded areas. Foamy white flowers in heads, above good foliage.

TRIENTALIS BOREALIS. The Star Flower grows in open woodland, to 9", with a whorl of leaves at stem top, and white flowers.

UVULARIA PERFOLIATA. Wood Merrybells. Easily grown in part shade. 18" stems, with drooping yellow bells beneath, 1" long.

VIOLA BLANDA. Sweet White Violet. From shaded woodland, where it will carpet, and bear fragrant white flowers all summer.

V. CANADENSIS. White flowers with a yellow base. Outside purple.

V. PUBESCENS. Downy Yellow Violet. With V. canadensis in dry woodland, and of easy culture. Bright yellow flowers.

V. ROTUNDIFOLIA. Roundleaf Yellow Violet. From deep cool woods in higher elevations. Very attractive lush round leaves and bright yellow flowers in May. 60¢ each.

ODDS AND ENDS.

THE MANAGER'S DESK.

PACIFIC GIANT DELPHINIUM. Each year, we grow a quantity of these fine hybrid Larkspur for local planting for cut bloom. They are grown in peat pots, and if put into the ground in May, they will begin flowering in August, and are much appreciated at that time. Of course they will again flower the following June. Also, we grow them by color, from seed, and altho they vary slightly, they are remarkably true.

PLEASE NOTE. We cannot ship these until mid-May. We do not have them at other seasons of the year. And we suggest that they do not ship well to extreme distances.

PLANTS IN PEAT POTS, ready in May, 35¢ each; 5 (alike), for \$1.50.

ASTOLAT Pinkish shades, ranging from pale blush to deep rose.

BLUE BIRD. Clear medium blue, with a white bee.

BLUE JAY. True medium blue, with a black bee.

CAMELIARD. Lavender or softest blue, with a white bee.

GALAHAD. Clear white flowers of giant size and glistening texture.

SUMMER SKIES. Clearest light blue, with a white bee.

AZALEA MOLLIS HYBRIDS.

These deciduous Azaleas are entirely hardy here. We grow them in some quantity, and three years ago, in an effort to obtain more varied colors, we bought seed of an outstanding mixture. Now these seedlings are three years old, and many have flowered. They range from 9" to 12", many of them branched, or with several stems. One group should give mostly YELLOW flowers. Another may even have shades close to SALMON. We offer a choice, but we cannot be responsible for the color. And it is best to plant these where they can have extra care for a year or two, before they are permanently placed. Shipped bare root, but transplant well.

STRONG 9-12" SEEDLINGS, either color group, \$1.00 each.

DAPHNE CNEORUM.

The Garland Flower does well for us, and we always have it in various sizes. This charming pink flowering shrub is very well known, and should need no description. But its culture always has been a matter of controversy. Here, we feel that it prefers a poor light soil, in full sun. However, in warmer sections, some shade against afternoon heat may be necessary.

ONE YEAR OLD TRANSPLANTS, bare rooted, 25¢ each.

STRONG, TWO YEAR OLD TRANSPANTS, bare rooted. 75¢ each.

This column endeavors to tell you how I try to handle the problems that I face day by day in selling plants by mail. And this time I have had to face again the matter of ever increasing costs. As you all know postage rates have advanced, -slightly it is true but enough over a year to make a substantial figure. Of course I might stop sending you a copy of your order as we have booked it, and save 5¢, plus the envelope. But this does on occasion save confusion, and I am loath to do it. And I have also noted that we are getting ever larger numbers of orders for but one or two of the unusual things we offer. Such orders cannot be handled at a profit, but again I dislike to turn away any sale.

FOR THAT REASON, AND THE PRECEDING AS WELL, PLEASE NOTE THAT FOR ORDERS OF LESS THAN \$5.00 FOR PLANTS, WE NOW REQUIRE AN ADDITIONAL 10% OF THE AMOUNT SENT US.

Postage bills remain a problem also. If you will enclose an extra dollar, more or less, we will immediately refund any surplus of 10¢ or more after completing shipment. And we do bill charges of 10¢ or more for postage, which we would appreciate receiving as soon as possible.

WE GUARANTEE ONLY SAFE ARRIVAL OF PLANTS. If received in bad condition, plant them out at once, and then notify us. Please do not return them to us, as that will surely finish them. We will then refill the order if possible, or issue a credit for the future. We cannot guarantee plants to grow or to blossom, for that is beyond our control.

We can ship by Express if desired. It is always more expensive than by post, and is slower as well. Airpost is often justified for distant points, and permits lighter packing. Most shipments are sent SPECIAL HANDLING, and the extra cost is small.

Shipments to California, and other states that have inspection requirements at port of entry, travel entirely at the purchasers risk. If refused entry, we do not refund.

Canadian shipments require a Permit to Import, to be had from Ottawa. There is also an extra charge of \$1.00 for Vermont Special Inspection, required for entry.

To the best of my knowledge, all plants we send out are correctly labelled. We are inspected annually by State and Federal officials. Mixtures, if they occur, will be corrected if we are notified at once.

U.S. DEPARTMENT OF AGRICULTURE

Nurseries, Inc., Shelburne, Vt.

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Permit #2

On our plants... delivery charges. Please... our order, we will refund the excess. If you prefer... add 10% handling.

Nursery and Seed
Catalog Section

Gardenside Gossip

A Publication of Gardenside Nurseries, Inc.
Shelburne, Vermont

Volume Twenty-eight
Fall 1963



MENS SANA IN CORPORE SANO.

The human race has many needs and they are varied. But perhaps the greatest need of all is expressed in these words of Juvenal,--they translate to read,--

A HEALTHY MIND IN A HEALTHY BODY.

Peace of mind and good health come from activities which interest as well as exercise the person who indulges in them. We have no argument with those who golf, or fish, or even with those who paint. But keeping in mind that the production of something lasting and beautiful is of major importance, and especially so when it combines with a bit of good healthy perspiration,--do you know of a better way to attain the desired end than by making a garden?

For here is exercise in beautiful surroundings. An opportunity to be creative in one's own way. And on occasion when problems arise and you cannot vent your feelings on your associates, how better to blow off steam than by assaulting those pesky weeds?

Spring and summer,--even fall and winter, the gardener has the best possible way to attain health and happiness.

National Agricultural Library
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U. S. Department of Agriculture

LILIUM, T.A. HAVEMEYER

On a hot August day in 1935, Tom Barry a direct descendent of the long ago firm of Ellwanger and Barry, nurserymen of Rochester, N.Y. was helping thresh grain at his farm in New Jersey. When the threshing crew went in to dinner, Mr. Barry stopped in his garden to see if the blooms were open on an interesting hybrid lily he was growing, for he operated a nursery garden, and enjoyed making crosses between difficult to grow plants. What he saw took him to the house to insist that all there come out to the garden to see what he had accomplished. We have the story from one who was there.

Using as a parent, the lovely yellow trumpet species, *L. sulphureum*, and taking pollen from the orange *L. henryi*, he had obtained an entirely different flower, a huge and rather flattened bloom, with slightly recurved petals. In color it was a soft buff yellow, with a deep green throat. Later on he was to find that it could grow to be extremely tall, even to 12', altho six feet is more common, and that the open head of blossoms would bring the slender stem over to the ground, so that it required staking. But it was the unusual thing, at that time, a cross between a trumpet lily, and a turkscap. Even today, it is notable for that reason alone. In color and form and size, it is still outstanding. The stem still requires staking, but that is a minor task in return for the glory it brings to the mid-August garden. It is very hardy, and free of disease. Wonderfully fine to plant amongst shrubs, which help support the stems.

Mr. Barry sent us bulbs, and we have grown them ever since. It went to England for the coveted A.M.R.H.S. in 1937. It has always sold at a good figure. Now we have it in quantity, and we hope you'll buy several, rather than one, to enjoy it in a massed effect, when it shows to the best advantage.

STRONG BULBS, \$1.25 each; five or more for \$1.00 each.

The prices on our plants do not include delivery charges. Please add postage to your order, we will refund the excess. If you prefer we will ship by railway express. On Orders of \$5.00 or less add 10% handling.

LILIES AND LILY SHOWS.

OUR OWN LILY INTRODUCTIONS.

ALASKA. There are now many hybrids with the blood of L. henryi, but this is one of the first and still one of the best. The stem is sturdy and tall, and needs no staking. The flowers are large, white, with a yellow throat and have a faint reddish lavender spotting. All the pedicels carry more than one bud, and the secondary ones open as the earlier ones fade, giving a long period of bloom. Begins to open in late July, and lasts well thru August. \$2.00 each.

CHERRY GLOW. The second of our Pink Shelburne Trumpets to be named, has much to commend it. It withstood last year's low Memorial Day temperatures and was not nipped by the early May frost of this year. The good sized flowers are nicely edged in bright pink, and this color suffuses the bloom. In fading there is no muddy shade. Grows readily so that we have a considerable stock of it. Botrytis resistant also, to a considerable degree. \$2.00 each.

DAINTY LASS. With us, this variety does not grow over 30" tall. The slender wiry stems and nicely formed small flowers are different from the more massive sorts. Beautifully flushed with pink, the flowers facing slightly upward. \$2.00 each.

FAIR LADY. An almost pure white Shelburne Hybrid, this is cool and lovely in the late July garden. Like most of our named clons of Shelburnes, this has outward facing flowers, rather than drooping ones, and the color can be seen. \$1.50 each.

HERCULES. Because it flowers late in July, this sturdy hybrid supposed to be L. regale with L. longiflorum pollen, is valuable to prolong the trumpet lily season. The flowers are dark outside, but clear white with a yellow throat. Our seedlings of this, with tetraploid longiflorum pollen were stopped so badly by frost last year that they have not yet flowered for us. \$1.00 each.

LEMON FAIR. This is the earlier flowering of two trumpet type Aurelian Hybrids sent out by us in 1956. Flaring widely, but held quite outward, the soft yellow flowers are very lovely and cool on hot July days. The stream for which it is named wanders lazily thru Lake Champlain lowlands. \$2.00 each.

LOVELY LADY. This quite similar sort precedes Fair Lady, and is at its best here by July 10th. There are many white trumpet lilies, but these two are clons, rather than strains, and are therefore exactly alike. \$1.50 each.

METAWEE. A companion to Lemon Fair, and like it named for a cool Vermont stream which we particularly admire. Soft yellow trumpets, openly flaring Aurelian type, at their best in early July. These both resisted the May frost well. \$1.50 ea.

WHITEFACE. Named for the Adirondack Mountain peak, so prominent across Lake Champlain, this is a large, heads-up bloom which permits the interior of the flower to show. The trumpet flares well, and the tips of the petals curl back to give a white effect altho the outside of the bloom is dark. Strong stem of medium height, the flowers in a flat head. \$1.00 ea.

WINTER SUNSET. This was the first of our Pink Shelburne Trumpets to be named and disseminated, and the Award of Merit it received from the Royal Horticultural Society, hangs in our office. It is permanent and hardy, but it is slow to increase and the demand keeps our stock low. The flowers have a soft rosy glow that is indescribably lovely. \$4.00 each.

SIZE OF BULBS. Unless a size is stated, all bulbs will be of strong flowering size. This naturally varies considerably.

Last year at this time, and in this place, we told you about the first of the hybrid Martagon Lilies, which were sent out from Sutton Court in England, by the noted Daffodil breeder whose home it was and for whom one of the best was named, - MRS. R.O. BACKHOUSE. Some of the others were GUINEA GOLD and BROCADE. The point was that in the garden of George Slate at Geneva New York, these had done very well and there were a lot of surplus bulbs available, which it was proposed to sell for the benefit of the North American Lily Society. We offered to tell you about them and to ship them out, at \$2.00 each, and charging just enough to cover our trouble. When Dr. Slate brought us the bulbs, he had not only the first one, but the other two as well. We were able to sell Brocade to another grower, and we sold a good number of Mrs. R.O. Backhouse, but at the end of the season we still had plenty of it left, and Guinea Gold as well. The bulbs were put into the field in November, and all have grown. Therefore we offer these two sorts again, at the same price, for the benefit of N.A.L.S. If they interest you, this is a fine way to help, and at the same time to add beauty to your garden. Neither sort is commonly available. One is buttercup yellow and the other is yellow flushed magenta rose and spotted red. --We have just noted that Guinea Gold came from Dr. Frank Skinner.

Lilies play an important part in our life. First of all, perhaps, we sell enough of them to materially help our income. But in itself, that is not the major reason for our liking. They are fascinating to know and work with, if one likes plants. Only a few years ago, we had practically no forms except those growing wild in the Northern Hemisphere, in America, Asia, and Europe, for none are found south of the Equator. And most of the bulbs in commerce were dug from the wild, so that culture, of necessity strove to duplicate natural conditions, often with but slight success. Then arose the conception that lilies were difficult to grow. Finally, after 'Chinese' Wilson had brought us the Regal Lily, which proved of easy culture, others than a few devoted enthusiasts began growing and hybridizing them. More has been learned of lily culture in the past forty years, than in all the years before. And more has been accomplished in hybridization in the past twenty years than ever, to open our eyes to the real possibilities that are still before us. Beyond much doubt, after another twenty years, most sorts now being grown will have been discarded for more beautiful, more diverse, and more easily grown forms. And if you are the sort of person who has to know what the future holds, lilies give you an opportunity to discover for yourself, by growing and crossing them to see what you can produce.

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LILIES AND LILY SHOWS.

Those of you who may have been attending Lily Shows for several years, and were at Washington this year would have seen full proof of this statement as you admired the new forms and colors there. And it would have been the same at any other Show. At Worcester, Massachusetts, for instance, we saw new Yellow Tiger hybrids, which far exceeded in beauty the varieties displayed by the very same growers, only a few years ago, many of which are not yet available in quantity for sale. And from other areas, we saw varieties which but a few years ago we would not have considered possible to grow at all, now being displayed in quantity, and their culture made known, simply because of new knowledge of the growing of lily seed.

If we urge you to become interested in this fine hobby, it is because we know how many are finding real pleasure, as well as an added incentive for gardening, in the work of producing new sorts. Moreover, we are sure that as you become interested, you will wish to join Regional Groups of the North American Lily Society, and thus become acquainted with the fine folks near you who grow lilies. Then of course, the next step will be full membership in the Society, which could as well be called the International Lily Society, for we have members all over the world, including Russia. We have had interesting correspondence with these far-away persons. But better still, we have made friends with other lily growers nearer by, who have given us a new idea of friendship, thru a common interest.

We went to Washington to see the Show and to attend the meetings, and did both. We also met old friends from all over America and made new friends, including one from South Africa and another from England. We saw the fine new building of the National Arboretum, where the Show was held, -perhaps the finest setting for a Show of any kind we have ever had. We visited the Arboretum and wandered thru Fern Valley, for which we have furnished many plants, and saw others we wish we might grow, or hope to try. We saw also the famous collection of evergreen forms that the Arboretum has recently acquired, which astounded even us, as familiar as we are with such things. And too, we saw the Lincoln Memorial, and the changing of the guard at the Tomb of the Unknown Soldier. And much, much more.

Next year, we'll be at Hamilton, Ontario, at the new building in the Royal Botanic Garden there. The whole complex is one of the finest in the country for those interested in plants and wild life generally.

HOPE WE SEE YOU THERE.

OUR SPECIAL LILY STRAINS.

AURELIANENSE. About 1946, we first obtained seed of Aurelian from a forgotten source. All the resulting bulbs were of the trumpet type, and while flaring forms later emerged, we never had any evidence of the *L. henryi* blood. Over the years we have used them in breeding and have offered them on occasion. The lot we now have go back to that first lot of seedlings. They have soft yellow white coloring, for the most part and seem particularly hardy and permanent. \$1.00 ea.

BARRYI. Presumably these are seedlings of the *Havemeyer Lily* for Tom Barry sent them to us, as he sent out many others to his friends. For the most part they have better stems than their parent. The colors vary from white to green and yellow, often two toned. The flowers reflex but are not extreme. Most have the extra bud on the pedicel ensuring a long period of bloom. Opening as they do late in July here, and lasting well thru August, they are particularly valuable. We have a fine stock this year. Very hardy. \$1.50 each.

CHAMPLAIN HYBRIDS. After many years of crossing on the original Shelburne Hybrids, we now have a widely diverse strain all of which have much the same parentage. Rather than discard them, we have put them together and offer them for the July garden. Some pinks and yellows have slipped in, but for the most part they are Shelburne Hybrids with the upright stems and outward facing heads of that strain. The bulbs are good this year, and will be graded 6" or larger. 50¢ each.

GREEN DRAGON SEEDLINGS. We used the de Graaff variety as a seed parent with our *Yellow Trumpets* hoping for more color in the former. Only a few showed yellow, but the resulting group of seedlings were of such high quality and vigor that we have kept them and continue to offer them. In bloom here by July 20th, they are a bit later than others. \$1.00 each.

SHELburne HYBRIDS. We now feel that the *Champlain Hybrids* are preferable but do have a small quantity of the original stock of this *L. sargentiae* by *L. regale* hybrid at 50¢ each.

SUNBURST SEEDLINGS. From the earlier Sunburst group of *Aurelian Hybrids*, we raised a lot of seedlings which mostly resemble *L. henryi*, but are earlier and somewhat more varied in color. Opening in early August, they provide color in a slow period and we have found customers here admire them. 50¢ each.

PINK TRUMPETS. These are true *Shelburne Hybrids* with all the quality of that famous strain. Back in the forties, we first observed pink coloring, and over the years we have intensified it with selective breeding. We have named several clons but over the years the larger portion of our selections have ended in this group which is unsurpassed for color. The pink may be a pencilling on the edge of a petal, or an entirely suffused bloom. It is never purple, but truly pink or rose. It would be easy to name many clons from this group, but we feel that for the gardener chiefly concerned with show, this mixed lot is the best we can offer. STRONG BULBS, \$1.00 each.

YELLOW TRUMPETS. Again *Shelburne Hybrids*, but this time they show the use of the *Butterfield Lily* pollen. All are good trumpets, facing outward, and all are nicely yellow. Clons we have selected and tested have been re-introduced to the larger stock and we now have a goodly number of fine bulbs. They will delight you in the mid-July garden. \$1.00 each.

FINE LILIES FROM OTHER HYBRIDISTS.

ADDINGTON. One of Miss Prestons fine hybrids, from Ottawa, this early July sort grows to 3' and has upward facing cup-shaped yellow flowers, with chocolate spots. \$2.50 each.

ALLEGRA. One of the three new Potomac Hybrids, this is white, suffused with pink lightly, so that the effect is almost pure white, slightly spotted. It is of easy culture. The huge flowers, like slightly recurved Gold-banded lilies, open in early August, and a good stem will carry even 25 blooms, with a delightful fragrance. \$6.00 each.

AURORA. The third of the new Potomac Hybrids, originated by the U.S.D.A. This is quite similar, with perhaps more color than the preceding. All may grow to 6', and there are secondary flowers on the pedicels, so that they continue for a long time. (We regret that the third sort, ADVANCE, is not in large enough quantity to be offered this year). \$6.00 each.

BRANDYWINE. Also one of three lilies also from Beltsville, and first offered in 1953. Later they were made tetraploids, and this added to their strength and hardiness. An odd soft orange shade, spotted with oxblood red, the flowers mostly facing outward. May grow to 3'. \$1.25 each; 3 for \$3.00

BRIGHT CLOUD. Of the Barryi type, and flowering in early August this is tall and strong growing. The flowers are broadly recurved, white at edges and tips, but the center is bright yellow. A loosely airy mass, in bloom. \$2.00 each.

BRONZE QUEEN. The Patterson lilies derive from crosses of L. cernuum with L. willmottiae and others. They are noted for ease of culture and hardiness, having originated in Saskatchewan. All are tall, with quantities of nodding turks-caps in many pleasing shades. This new one is unusual, -a yellow bronze, lightly spotted darker. Mid-July. \$4.00 each.

BURNISHED ROSE. An early flowering Patterson, standing 5' tall, the reflexed flowers rose, shaded with copper. \$4.00 each.

CITRONELLA STRAIN. All the plants in this lot are nodding yellow turks-caps, spotted with black, growing 4' or more tall, and flowering in July, they are a strain, rather than a clone, and there are slight differences between the individuals. \$1.00 ea.

DUNKIRK. This fine very dark red lily from Dr. Skinner of Manitoba, is very hardy and permanent. Reflexed flowers in a branching head. \$2.00 each.

EDITH CECILIA. Most of us consider that this is by far the best of the Patterson lilies. In color it is truly pink, with airy branching heads of reflexed flowers in July. It grows well for us, and is permanent. We have a fine lot this year. \$3. each.

ENCHANTMENT. (Pat. #862) Vivid nasturtium red flowers, upward facing on a strong stem of glossy rich green foliage. July flowering, and makes a tremendous show. 75¢ each.

EVENTIDE. Close to Bright Cloud, this has a large pyramidal head of semi-recurved flowers that are cream overlaid with saffron, shading to orange yellow at the center. \$2.00 each.

FUCHSIA QUEEN. A newer Patterson, growing to 3', with fuchsia pink reflexed blooms, heavily spotted. Late July. \$3.00 each.

GALAHAD. A sulfur yellow Aurelian trumpet, from Dr. Frank Palmer. Green buds open to a clear creamy yellow. Bright orange anthers make a fine contrast. Strong growing; late July. \$3.00 each.

WHISKEY LILIES.

Will and Mary Thorp have a nursery garden in the pleasant village of West Chester, Pennsylvania, and are frequent visitors here. West Chester is on the edge of the Pennsylvania 'Dutch' country noted for its 'Hex' signs and for the Distelfink, -a bird that is common enough in other sections, -but that is here given a distinctive name. The rest of us know it as the Goldfinch, or Thistle-bird! Here are the splendid farms, tilled by families who love their land, and who know how to use all of it for the best, and how best to use its products.

Among their neighbors is a family that can grow Lilium candidum well, and the Thorps depend on them for the bulbs which they sell to the towns-people. And because they wished to see the plants in flower, they paid a visit to the farm one day in late June to find the family diligently picking off the petals of the Madonnas. When asked what the purpose was, for it was apparent that they were being carefully saved, they were told that these were the 'Whiskey Lilies'. Further inquiry brought out the fact that the lily petals were to be put into whiskey to form a sovereign remedy for most, if not all of the ills to which man is heir.

This was an interesting fact, and the Thorps were moved to explore it further. "How much do you use, and how often", they asked. And in all seriousness, the answer came, "Oh, we don't drink it. We rub it on where it's needed!"

The story was told us with a merry twinkle in the eyes of the Quaker Thorps and without a doubt, there was a similar twinkle in the eyes of those who made the statement to them. And yet one must recall the article from which we quoted in the Gossip last spring and which dealt with the use made by the natives of Kamschatka of the bulbs of the lily which grows wild there. The bulbs were boiled or bruised and were 'used externally in cataplasms for these purposes with success', -the purposes being 'emollient, maturing, and suppurative.' Can it be that we are overlooking a use for our lilies which could become a further source of income for those of us who grow them in quantity?

Only a few years ago, we supplied a lot of flowers to the nearby University, where research was being done on extracting what we understood to be an insecticide from them. We wonder if any of these found their way into whiskey. Perhaps we'd better look into this!

PLANTS IN MEDICINE.

Of course most persons know that much of our Pharmacopia comes from plants. We read that the Indians used 'herbs and simples' to cure wounds. And our own ancestors brought from homes abroad, the plants they were accustomed to make the simple remedies of the time, and which were also used to ornament their homesteads. One of these, the Spurge, or *Daphne mezereum* became a wildling in Vermont, as has the Sweetbrier Rose. *Saponaria* yielded a sort of soapy extract from its roots. And so it goes. We use Aconite, and Belladonna and many more.

At the Shelburne Museum here, is an old time Apothecaries Shop, complete with the labelled glass jars which held the leaves and barks and roots. We enjoyed reading the names, and trying to determine which of the plants we now grow for ornament had yielded the drug. Of even more interest is the fact we later learned that almost the entire Shop and contents came from the same area in Pennsylvania where the Whiskey Lilies grow, and thru the Thorps we came to know the donors, long pharmacists in Chester.

But there was a period in our history when such things were looked down upon and more reliance was placed on bleeding and the use of Calomel than on herbs, until eventually curious students decided to see what use could be made of the native flora. From that came the idea that many plants showed their uses in medicine from their form. The common *Hepatica* became the Liverwort, because its leaves were shaped like that organ. Whether the use of Rheum for upset stomach came because its leaves resembled that organ, we don't know, but it still has its place for the purpose.

It was one of the 'Thompsonites', as physicians who believed in this theory were called, who proceeded to prescribe for Rowland Robinson's character, Gran'-ther Hill when that Revolutionary veteran proclaimed his need for a 'bleeding'. Our blind author, Robinson wrote of the Yankee of the Vermont hill towns, before the Civil War. We have already told of the old man's answer to the doctor when he proclaimed that 'All we're arter is the trewth' with the reply, "You're arter yer livin', jes as all on us is". But when the doctor refused to bleed him, and instead prescribed some "pepsissiway and put it in some ol' Medford, and take a swaller three times a day, a good big swaller" he met with instant acceptance. To his son the old man said, "Jozeff, nex' time you go over to Hamner's, you git me a quart, and I'll put in three, four sprigs an' try it".

Perhaps the efficacy of lily petals in whiskey, like Pepsissiwa in rum, depends as much on the liquor as on the herb.

FINE LILIES FROM OTHER HYBRIDISTS.

GEM. This dark blood red hybrid of *L. tigrinum*, from Oregon Bulb Farms, attracted a lot of attention at Washington. It is early, flowering in late June or early July, when this color is lacking. Easily grown, and disease free. \$2.50 each; 3 for \$6.

GOLDCREST. This *L. philadelphicum* hybrid from Dr. Taylor, flowers here in June, its heavily 'furred' buds opening to outward facing unspotted yellow flowers, slightly reflexed and of good size. Never tall, -we like it. \$1.50 each.

GOLD STAR. A slightly later and bright yellow counterpart of Enchantment from Larry LaFrancis of Vermont. Strong growing and very showy in late July. \$2.00 each.

GOLDEN WONDER. A Golden Chalice Hybrid, growing to 3', with upward facing, soft yellow, unspotted flowers late in June, and thru early July, we particularly enjoyed this variety and recommend it for ease of culture. \$2.00 each.

GREATHEART. This outstanding hybrid Aurelian flaring trumpet from Miss B. Palmer, is becoming known and appreciated. A tall sort, with a pyramidal head of medium sized yellow white flowers whose center is a glowing flame. The foliage is good and there are secondary buds, so that it flowers over a long period. \$4.00 each.

HELEN CARROLL. Only a few bulbs of this shortest of lilies, whose flower buds are as long as the stem. Butter yellow, flat flowers in early July, face upward. \$2.00 each.

IMPERIAL CRIMSON. This and the following two sorts, are strains developed by Oregon Bulb Farms, and are basically of the same breeding as are the White Potomac Hybrids, so much admired. We have grown them, and find them very hardy, sturdy stemmed and heavily flowered. The color phases are very true, the blooms huge, the fragrance delightful. Flowering here in early August, and lasting over a long period, they should be planted for garden value, in preference to *Lilium Auratum*, which they resemble. This one is heavily flushed with crimson, spotted darker. LARGEST AVAILABLE BULBS, \$2. each.

IMPERIAL GOLD. This strain closely resembles the Gold-banded Lily, but has greater garden value. White flowers, 8" across, with a prominent golden band down each petal which is well spotted with crimson. LARGEST AVAILABLE BULBS, \$2.00 each.

IMPERIAL SILVER. Pure translucent white, heavily dotted vermillion. Huge flowers to 10" across, on 6' stems, with even twelve flowers in a head. LARGEST AVAILABLE BULBS, \$2.00 each.

JAMBOREE STRAIN. While quite similar to the preceding, these differ in more varied coloring, and slightly smaller blooms. We find them of easy culture here, and hardy. Crimson to silver and heavily spotted, they may carry thirty buds and blossoms. Now more plentiful and lower priced. \$2.50 each; 3 for \$6.00

LEMON LADY. From Dr. Skinner, this is a cool lemon yellow, with 12-15 outward facing flat blooms on 3' stems in July. The petioles are long, and the turkscap like blooms are airy and graceful. Very hardy, and we like it. \$1.50 each.

LEMON QUEEN. This Patterson may grow to 5' and in July will carry 25 of the nodding yellow turkscaps, heavily spotted. Lighter than the preceding, and taller. \$3.00 each.

LIMELIGHT. A tall, vigorous trumpet lily of soft lemon yellow. The long trumpets droop, rather than being held outward, but the outer color is as good as the inner, and the plant is remarkably lovely. A.M., R.H.S., 1958. \$2.00 each.

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FINE LILIES FROM OTHER HYBRIDISTS.

SHADE.

MEADOWLARK. A delightful upright flowered lily, with the blood of L. tigrinum, and others. The close head of soft yellow blossoms, which are heavily spotted with brown, like the breast of the bird for which it is named, makes a nice display in early July. Will stand fully 3' here. \$2.00 each.

MEGA. This is the 'tetra' form of the Beltsville introduction. It has true yellow flowers, spotted chocolate brown, which face both upward and outward. Flowers late in June, and is of moderate height. \$1.25 each; 3 for \$3.00.

MEI LING. Reflexed flowers of cream, with a golden center. This is one of a group of Aurelians, of this type, which flower late in July, or early in August, and are of easy culture. With us, seldom over 3'. \$1.00 each.

MELODY. In our opinion, this is Percy Byam's finest variety. A fine lemon yellow flower, facing straight out, the wide petals overlap, making the medium sized flower look massive. Very few spots, and medium height. Early July. \$3.00 each.

MOUNTAINEER. Last of the 'tetra' forms, from Beltsville. It is red, spotted with brown, with both upward and outward blooms. Not as tall as the others, and the color is not vivid, yet it blends well with the others. \$1.25 each.

MOONBEAM. An Aurelian, from Dr. Frank Palmer, with all the quality of his introductions. Shaped like a Goldband lily, and nearly as large. Greenish yellow, at the throat clear yellow. Deep brown anthers. Tall, and August flowering. \$4.00 each.

MYSTIC SUNSHINE. From Norman Lamb of Connecticut, this Yellow Tiger seedling has attracted much attention. It often will have four flowers on each petiole. Tall and strong, increasing rapidly to make a clump, it is a mass of soft yellow all thru July. \$1.25 each; 3 for \$3.00.

ORCHID QUEEN. A lower growing Patterson hybrid, with many fine reflexed flowers in light shades of pink, blending to give an orchid effect. July flowering. \$4.00 each.

PAINTED LADY HYBRIDS. The Martagon Lilies all appear to like a somewhat heavy soil, and a bit of shade. When well established they produce spectacular spikes of small, thickly petalled flowers, in close heads, and varied colors. When crossed with other allied species, many wonderful combinations appear, ranging from white to various shades of yellow red, and lavender, spotted in varying degrees. The bulbs if happy, will increase to make huge clumps. These Oregon grown hybrids are among the best. Mixed only. \$2.50 each.

PALOMINO. Large, pendant, reflexed globes, of a soft beige or buff give this Tiger Hybrid a place in the border, with Delphinium. We think it very unusual. \$2.50 each.

PAPRIKA. Thirty inch stems hold pyramidal heads of fine dark red blooms, opening in early July. Derived from the Tiger Lily but different. Try it in light shade. \$1.25 each.

PAULINA KLINE. A semi-recurved large majolica yellow bloom, shading to saffron, and opening in August. \$3.00 each.

PINK CHARM. This Patterson grows less than 3' tall, but is vigorous and makes a good clump. The blooms are a lively pink and open in July. \$3.00 each.

A question we are often asked is, "What lilies will grow in shade", and we have never been able to give a definite answer. For the fact is that shade is a relative matter and must be considered from all angles.

For instance a neighbor grows the Martagons and their hybrids in shade, and does them very well indeed. But this shade is from a grove of trees that had shot up densely and quickly, so that the first branches of the trees are nearly 20' above the ground. Light penetrates the area from nearly all sides, and the trees themselves have rather sparse foliage. The place is cool and airy, and rains reach it easily.

Once on a search for L. philadelphicum we followed an old railroad bed into a pine grove where the lily was said to be plentiful. Remember, this is the Wood Lily, so-called. Leaving the opening we wandered into the pines, but found only a few plants and these in openings where no trees grew. Returning to the railroad, we started back toward the point of entry and suddenly there were the lilies, growing in the cinders of the old track bed, almost in the full sun.

Lilium canadense grows in open meadows amongst hay which is mown each summer. But the really fine plants come from the edges of roads, where for a time each day the sun is shut out by taller trees, yet the sun does strike them fully for a time each day. We have found them in swamps in similar situations, often where a tree has gone down, to make a spot of sunlight thru the middle of the day.

We have some bulbs of Shelburne Hybrids in a border which sun reaches quite early in the day, but which has to the southwest at its back, a row of grape vines. Thus for a time in summer these lilies are in shade from about two, on. They have persisted, and are sturdy and erect, - better in fact than many other plants in the border, which does not get the weeding it deserves! Asiatic lilies also planted there have long since disappeared. Yet Shelburnes - which are Regal Hybrids - when planted at the north of our home, where sun never strikes directly, were weak after the first year, always leaning outward for more light, and have now gone.

So far as lilies are concerned, it would seem the ideal condition would be shade from the day's greatest heat, but better still would be to have plants about their lower stems, with the upper half in full sun and air.

Shade, -con.

How about other plants which grow in shade? Actually, many of them do not. One may go into woodland in spring, to find the ground carpeted with all kinds of interesting things, from the tiny Claytonia to the Giant White Trillium, and Cypripedium spectabile. Violets are everywhere. But when one returns in midsummer, one sees only ferns. Yes, of course, these other plants die away in midsummer. But is it not because of the intensity of shade?

Bloodroot grown in our beds, and Trillium, and the Violets also, if they have just a bit of shade will stay green all summer, the Violets flowering well and spreading. For in the spring, they get the sun they need, but after the leaves are in full leaf its effect is lost and they ripen. Obviously this is the best way for them to grow since here they persist while in full sun they may die during the heat of summer, unless mulched, or protected by other plants. This is particularly true of the Trilliums and other bulbous items.

When one goes into the really densely shaded woods of Hemlock and Pine, he is immediately aware of the lack of any undergrowth. The plants which like this condition are from the Heath family. Here is found the Pepsissiwa, of so great medicinal value, and its cousin the Pyrola. The Lycopodiums will sometimes grow here, but for the most part, the ground is bare. We feel it is the shade, rather than the often blamed carpet of needles, with its acid tendency as it decays, for do we not often mulch our lilies with pine needles?

Even the ferns do not thrive in the Pine woods, altho on their edges they will be found growing freely. Light must reach them from some source, altho north light is adequate, and direct sun is harmful. On the other hand, sometimes one finds such a fern as the Walking-leaf, which normally grows in dense shade on moss covered boulders and ledges which receive perhaps only a bit of north light, growing on an exposed dry ledge, facing due west, and shaded only by the leaves of tall deciduous trees in summer and the sparse foliage of the Juniper the rest of the year. Not really happy, of course, but persisting.

Shade therefore is relative. It isn't enough to dig a hole under a tree and put a plant of some sort recommended for shade, into it. Instead, as with all gardening into the hole must also go thought, and knowledge, and a willingness to experiment. From this comes another of the benefits of making a garden, -the stimulation of finding an answer.

FINE LILIES FROM OTHER HYBRIDISTS.

POTOMAC HYBRIDS. These were the first of the L. speciosum with L. auratum hybrids to be sent out from Beltsville, and they represented a major step forward in the production of better forms of these two species of lilies, resulting in the magnificent White Potomacs and the IMPERIALS, of today. These are much more like the Showy Lily, in its darker forms, are flatter, and stronger in growth of stem and flowering head. In bloom from August well into September. \$2.00 each.

PRIMROSE LADY. Of the Patterson group, this may grow to 6' and carry 30-40 flowers. These are much lighter yellow than other similar sorts, and they attract much attention wherever they are shown. Easily grown, but scarce. \$5.00 each.

REDBIRD. This magnificent dark red from Dr. Frank Palmer, shows the influence of its Tiger Lily, but its breeding is quite involved. Grows to 5', and makes a tremendous display in mid-July. Large reflexed turkscaps, in huge heads. \$2.00 each.

REGINA. This famous Aurelian from Dr. Palmer, has very large, and rather flat flowers of clear pure yellow, with contrasting brown anthers. In 1957 and again in 1958, it was judged as Best in Show. Grows to 6' and opens late in July. \$5.00 each

ROSABELLE. An upward facing rose colored lily from A.J. Porter in Saskatchewan, very hardy and of easy culture. Grows to 30" and flowers in July, the star shaped flowers deep rose to the center, and lightly spotted. \$1.50 each.

ROSALIND. Latest and best of the pink flowered Patterson lilies. Sturdy vigorous plants and bright, clean color. Opens late in June and continues over a long period. \$3.00 each.

ROSE QUEEN. Taller than the preceding, and flowers over a long period, making it seem later than the others. Like all the Patterson group, this is recurved, in deep rose. \$3.00 each.

RUBY. Last year, we called this Percy Byam's masterpiece, but after seeing Melody, we changed our mind. Nevertheless, this is one of the finest red, with both upward and outward facing blooms. Flowers early in July, and fairly glows. Only 30" tall usually. Flowers for a long period. \$1.00 each.

SENTINEL STRAIN. Fine white trumpets from Oregon Bulb Farms, much like our white Shelburnes, but more slender and drooping. They are remarkably true from seed, and flowering in early July with us, they provide a cool patch of color at a time when it is greatly needed. May grow to 5'. \$1.50 each; 3 for \$4.00.

SPOTLIGHT. Another June flowering Golden Chalice Hybrid, and its upright yellow flowers are gaily spotted. Easily grown, so give it a sunny corner, to make a clump, soon. \$2.00 each.

SPOTTED GOLD. Obtained by us from a Canadian grower last year, this has grown readily. It has medium sized, not too deep yellow flowers, very heavily spotted. They are drooping turkscaps. Propagates readily, worth a trial. \$2.00 each.

SUNDANCE. By its performance here, the very best of Dr. Palmer's introductions. It propagates readily, grows well, and resists frost. It's lovely huge bowl-shaped blooms, are a deep sulfur yellow, on 5-6' stems. Late July. \$2.50 each; 3 for \$7.00.

SUTTON COURT. One of the older Martagon hybrids, this is quite easily grown. The small recurved flowers are yellow, spotted pink and burgundy, in July, on 4' stems. \$2.50 each.

FINE LILIES FROM OTHER HYBRIDISTS.

FERN VALLEY.

TABASCO. A dark chestnut red lily of the Mid-Century group. It flowers in June, before Ruby which it resembles, and soon makes a good clump. The petals drop cleanly. \$1.00 each.

TANGO. We like this older Mid-Century lily for its pale amber flowers which shade to deep parchment and are spotted black at the center. Not tall, and flowers in early July. \$1.00 each.

TESTACEUM. One of the oldest hybrids known, dating to 1810. It is L.candidum x L.chalcedonicum. Flowers in June, with soft apricot flowers, flattened and facing downward, the petals tightly reflexed, on a 4-5' stem. Succeeds where L.candidum does well. May be planted in September, or later, but put it barely under the surface. LARGE BULBS, \$2.50 each.

TETRAPLOID LONGIFLORUM. Lovers of the Easter Lily will like the heavy substance and huge trumpets of these perfectly hardy L.longiflorum. It is true they do not grow tall, usually a foot at best. But they soon make good clumps, and are ideal for the front of the border, or for the rockery. We offer from the original six clons, our choice, at 75¢ each.

WHITE GOLD. A very lovely Patterson, with creamy white flowers on 2' stems in July. Partially recurved, they are graceful and lovely. Slight shade helps the coloring. \$2.00 each.

WHITE PRINCESS. Taller and with larger flowers than the preceding, this Patterson, which reminds us of a smaller Nankeen Lily, flowers in late June and early July here. It opens pale apricot and fades to a light cream. Easy to grow and will stand a light soil and full sun. \$2.50 each.

YELLOW TIGER HYBRIDS. We now have a good supply of these fine and easily grown mixed seedlings from Norman Lamb. A few have upright flowers but most have outward facing, reflexed blooms in varying shades of yellow and orange. Of the easiest culture they flower in July and last for a long time. For sheer display, plant several and let them increase/ \$1.00 each.

PINK GLORY STRAIN.

Lilium japonicum is being used by many hybridizers, particularly on the West Coast, to bring a different shade of pink into the offspring of crosses with it. How successful these have been, will be realized by those who have visited the major Shows this season. At all of them, we have seen trumpets of an unusual soft pink shade, instantly recognizable as deriving from L.japonicum. Unfortunately, most of those being shown are not available in good sized bulbs, at a reasonable price, and often the bulbs fail to grow when brought to the hotter areas of the East and Midwest. But we believe that the OREGON BULB FARM strain offered above, will succeed in these areas, and the bulbs are moderately plentiful.

This strain derives from using japonicum pollen on bulbs resulting from a cross of auratum and speciosum. The 8" flowers are a pleasing almost salmon-pink, in widely flaring trumpets. Fragrant, of course, with good foliage. STRONG BULBS, \$6.00 each.

A SPECIAL OFFER, -- We will send you one bulb of Pink Glory Strain, with one bulb each of the three Imperial Strains, FOUR BULBS IN ALL, for \$10.00, if purchased before October first.

Elsewhere in this Gossip, we have mentioned Fern Valley in the National Arboretum at Washington. For some years we had supplied plants for it, on orders from a lady who described herself as a 'friend' of the project. And because we were to be at the Arboretum itself for our Lily Show it seemed logical to mention the fact, and say that we would like to see the project.

We had not been in Washington very long before a phone call came to say that while our friend was not in the city, she had arranged for another person to show us the Valley, and when would we be free to do so. Since there were many things to see in the city, and much at the Show itself to do, we had to allot a very short two hours late one day to the visit, and this threatened to be cut short by a storm, which later on did flood the entire area. The two hours became stretched a bit, and we returned to our Motel with fear and misgiving, to have the door literally opened in our face. But we were in time for the final function and all was well. Anyway, the trip was worth its cost.

First of all, we learned that Fern Valley is a project within a larger one. The area which is so-called was a 'gulch or gully used as a dump for farm trash', to quote from a published description. Because of this, the trees had not been cut, and the entire 900 feet of length, and 150 feet of width is filled with mature trees of oak, beech, hickory and tulip trees, with some scrub pine. There is a spring fed brook running thru its length. But originally this was cluttered with debris, and the usual growth of Hall's Honeysuckle and Poison Ivy was well established. Prior to 1958 some planting was done, after the area had been cleared a bit. And that year a group from the National Capital Garden Club League calling themselves the 'Fern Valley Committee' took over the work. We were told that un-officially, they were also known as the "Mink and Muscle Club".

It is this phase that particularly intrigued us. These ladies found that building rock walls, weeding out vines, planting, and after care, gave an outlet for their energies that repaid them fully for broken finger nails, mosquito bites, ivy poisoning, and no doubt lame backs and stiffened knees. They were fortunate to have most expert advice, and what has been accomplished is of far greater value than perhaps they realize. Most Arboreta stress plantings of trees and shrubs. But here are rare ferns and common ones, and as well their associates in the wild, in woody material, many of which were strange to us. Where else can this be true?

Fern Valley, -con.

We were fortunate in our guide, for we now know that she had actually been in charge of the planting. Her knowledge of the material was interesting. Her knowledge of its needs was enlightening. She was not discouraged by losses, but simply was moved to find the reasons for them and how to avoid them in the future. The project still needs money, and it needs unusual material and with a great deal of pleasure, we suggest here that if you have either to give, that you write to

Mrs. Morrill Donald, 3703 Jones Road,

Chevy Chase, 15, Maryland,

and tell her what you wish to contribute.

A report of the work has been published and a reprint is available we believe, as is also a booklet describing the plants with a plan showing where they are found. But there are things briefly mentioned in these pamphlets which could well be described at more length, and we should have made notes, rather than trying to recall, some weeks later, all that we learned. One thing in particular interests us now, when we learn by reading that the limestone wall we saw was built of stone from part of the fortifications built by General Braddock at Frederick Maryland, during the French and Indian War. Another item of interest to us is that the sap of the Mockernut, *Carya tomentosa*, will produce a syrup from its sap as desirable as that of the Maple. This of course, we won't let ourself believe! Rank heresy.

One fern we do not recall seeing, and for which we do not at the moment have a source is *POLYSTICHUM LONCHITIS*, the Mountain Holly Fern. It grows on the Gaspe Peninsula, and also about Georgian Bay in Ontario, for we formerly had it from both areas. It may also grow around Lubec, Maine, where are to be found many alpine plants, such as *Rubus chamaemorus*. If anyone knows of it, we would be glad to hear, and of course the Friends of Fern Valley would like it.

One thing would help Fern Valley, and this we can supply. There were several places where the native Eastern American lilies should be growing. Our own *canadense* and *philadelphicum*, *superbum* from the surrounding fields, *michiganense* from further west, and *grayi* and *michauxii* from further south. We aren't just certain whether any of these were already there, but they will be.

Something of this sort could be done by Garden Club members in many parts of the country. Wouldn't it be a worthwhile project for your club?

LILY SPECIES AND OLDER FORMS.

AMABILE. Bright grenadine red turkscaps open in June and are a mass of color. May grow to 3'. 50¢ each.

AMABILE LUTEUM. A soft yellow variant of the preceding. spotted black. Both make lovely masses of color. 75¢ each.

AURATUM PLATYPHYLLUM. This Gold Band is close to the type as we know it, and is the best form under our conditions. The flowers are large and widely flaring, white, with the prominent golden band down each petal, and are spotted pink. May open in late July here, and thruout August. \$1.50 each.

AURATUM JAMBOREE STRAIN. Those who love Gold Band Lilies, but have trouble with them, should try these hybrids which are very similar, and more easily grown. SEE PAGE SIX.

BROWNII. We believe this to be the true form, very dark brown or oxblood red on the outside. The trumpet is very long, slender and is a marble white inside. Flowered here this year, in early July. The Pheasants enjoyed the buds! \$3.00 each.

CANADENSE. The eastern form of the Meadow Lily is yellow, with brown spots. It makes a beautiful head of upside down bells often on five foot stems. Common to wet meadows, but the bulbs are above water, not in it. 50¢ each.

CANDIDUM. The Madonna Lily grows to 4' or more, with a terminal spike of open white bells, delightfully fragrant, in early July. Plant just under the surface. 75¢ each.

CERNUUM. This charming lavender turkscape opens its nodding bells in June, and early July. Rather like the Coral Lily in form. Easy in light soils if planted 3-4" deep. 75¢ each.

CONCOLOR. The little Star Lily is one of the delights of June. It is happy on our light soils and will persist for years if planted deeply. Upright, star-like, orange red blooms in a tight head, on a slender 30" stem. 50¢ each.

CONCOLOR CORIDION. This is the golden yellow form of the Star Lily. Grown from seed, it varies slightly, but our bed was entirely true to color. 75¢ each.

GRAYI. Upside down thimbles of cherry red, with an orange throat and mahogany dots. Native to the Carolinas, at high altitudes, it grows well here. Seed grown stock. \$1.00 each.

HANSONI. A sturdy Korean sort, cadmium-yellow flowers of great substance in huge heads in June. Resembles the Martagons, and is often used in hybridizing with that species. \$1.00 each.

HENRYI. Henry's Lily is noted for its hardiness, and ease of culture. It has contributed much to the newer hybrids. The species grows to 6', with a large head of reflexed, bright orange flowers with brown spots. August. 75¢ each.

HENRYI, GOLDEN FORM. We have a small stock of this fine, unspotted, golden form. \$1.00 each.

JAPONICUM PLATYFOLIUM. This lovely soft pink lily flowers in June. The widely flared trumpets are exquisitely fragrant. This is a stronger, seed raised form, which likes peat humus and a slight bit of shade. \$1.50 each.

LANKONGENSE. This charming lily is satisfactory here. It blooms in July on 3' stems, and is like a larger stronger cernuum. The flushed white flowers are dotted with rose purple, are recurved and nodding, and appear pink. \$1.00 each.

LILY SPECIES AND OLDER FORMS.

LEICHTLINII. Citron yellow flowers dark mahogany in late July and August, on a 4' stem, somewhat resembling L. tigrinum. It has been unobtainable until just recently. \$2.00 each.

MARTAGON. The true small flowered dark lavender pink form from southern Europe. \$1.50 each.

MARTAGON ALBUM. The pure white form of the preceding. All Martagons have partly recurved flowers of great substance in dense pyramidal heads. Generally all the group, and the hybrids prefer a heavier soil and partial shade in the east and midwest, we believe. \$2.00 each.

MICHAUXII. The more southern form of L. superbum, but hardy here. Formerly L. carolinianum. Slightly fragrant. \$1.00 each.

MICHIGANENSE. Rather like a fire-red Meadow Lily, but more recurved. Found from Ontario, west and south. \$1.00 each.

MONADELPHUM. Sometimes called the Yellow Martagon. Tall, and stately sort often 6' tall. Waxy segments of deep yellow, recurved, and spotted purple, in June. \$2.50 each.

NEPALENSE ROBUSTA. This has again survived a winter, but we do not get flowers. Perhaps it needs to become established. The recurved, lime-green bells with a purple blotch in the throat are most exotic looking. We still hope to see blooms. Don't forget, -the stems wander about. \$3.00 each.

PARDALINUM GIGANTEUM. The Sunset Lily does well here. We had a fine display this year. Nodding turkscaps in a large head are tangerine orange, shading to garnet red and well spotted on tall stems in July. \$1.00 each.

PHILADELPHICUM. Our native Wood Lily. Found on sandy plains, and also on road edges on heavier soils, in partial shade. One or two upright orange red flowers, spotted black. \$1. each.

PUMILUM. The Coral Lily grows about 2' high, and carries 2" wide bright red turkscaps in profusion in June. 40¢ ea.; 10-\$3.50

PUMILUM, GOLDEN GLEAM. A bright golden yellow form of the preceding. Entirely true to color. 50¢ each; 10 for \$4.50.

PUMILUM, YELLOW BUNTING. Dr. Skinners soft yellow form of the Coral Lily. Possibly a hybrid, this is rare and slow to increase. \$1.25 each.

RUBELLUM. Quite like L. japonicum, but smaller and earlier. One of the loveliest pink trumpet lilies. Fragrant. \$1.50 each.

SPECIOSUM ALBUM. Pure white form of the August flowering Showy Lily. Much reflexed blooms, 3-4" wide when open, with a green stripe down each petal. Very fragrant. \$1.50 each.

SPECIOSUM, CRIMSON GLORY. Recurved but very large white flower spotted and suffused with crimson and carmine. Better than either rubrum or magnificum. \$1.00 each.

SPECIOSUM, LUCIE WILSON. Quite the best growing variety with us and will grow to 5'. Very disease resistant. Reflexed large fragrant flowers are soft pink, margined white and spotted deep rose. 7/9" bulbs, \$1.00 each; 9/11" bulbs, \$1.50 each.

SUPERBUM. The showy Turkscape Lily, native from New York, south and west. Often stand over 8' with huge heads of orange and red reflexed bells. Very hardy and easy. 75¢ each.

OF MEN AND MACHINERY.

Sometimes, as you have driven into the countryside of a summer's day, you must have seen a field baler at work pressing hay, -picking it up from the row, and perhaps even putting it up onto a wagon with only one man to pile it away. And as you marvelled at the 'labor-saving machinery' of the present time, did you give a thought as to how it used to be before such tools were available?

Recently we watched such a machine at work, and visited with a group who also recalled our common ancestor. And as our visiting brought him vividly to life again, suddenly it reminded us that we have known the whole length of the changes that have taken place in farm work of all kinds, and particularly that of making the hay crop, so very important to a dairying economy such as is Vermont's.

The spark that lighted the recollections and made them so vivid was a chance remark about a 'scalp-lock' left in a mowed field. "Grandfather never would have left that", was the comment, and it was so true. For a swatch of hay left standing by a careless mower, whether man or machine would not have been tolerated in his fields. Today, with tractor drawn mowers, using a cutter-bar seven feet long and travelling at twice the best speed of horse drawn equipment, and with the words, 'hurry, hurry, hurry' always ringing in the operators ears, what does it matter that less than a pound of hay is not harvested?

Originally, of course, it was the mark of a scythe-hand who couldn't do a good clean job, or was being pressed by the mower behind him and was afraid of getting his heels 'clipped'. In those days when men took pride in their ability to do a perfect job, since the labor was tiring, and something was needed to give one a sense of achievement, the unfortunate person who left such a lock would have been made fun of, if for no other reason than to pass the time. Later, when the horse-drawn mower came, with its four and five foot bar, it was still a mark of skill in driving, and in turning corners. The hay of itself was not valuable. But rather than have it left to create comment, grandfather would hook a scythe over his arm, and walk far to carefully clip the lock down. And it was for the same reason that haying was started with 'mowing out the road', for the sides of the highway were machine clipped, so far as possible, and then were scythe mowed to the last spear, all to be raked by hand and drawn to the barn.

Of men and machinery, -con.

So too were the fences, and the brook which ran thru some of the fields was mown to the willows which fringed it. A strong shoot from the willows, with a branch toward the top, could be made into a fork, by sharpening these branches, and then bending them into form, after which they were bound with a piece of the bark so carefully peeled from the stem to provide a smooth surface, until they had dried in shape. This was in fact the primitive hay fork of the settlers and was in use more often than realized, even into the twentieth century.

Before the mowing machine was invented the scythe cut down the hay and left it in a row rather well pulled together. The next move was to spread this out a bit to permit air and sun to penetrate and dry it. The fork was a needed tool, and willow trees were handier than the blacksmith's forge. Moreover, a willow fork was less expensive and more easily repaired. Later, after the advent of the mower, altho the hay fell in a flatter swathe, it still needed to be stirred, and a machine called a 'tedder' went over the fields, whose forked teeth were made to lightly lift the hay from the ground and throw it into the air, to leave it loosely open. Today a 'crimper' is used, which picks up the flat swathe and feeds it between two rolls close enough together to move it and crush it, and as well corrugated to lightly break the stems so that hay dries in much less time. To watch this being done at nearly ten miles an hour is to bring back memories of the days when the fork was a potent tool, and its use to stir hay was an every day affair, done just as fast as men could be induced to walk.

Once dried, the hay must be raked so that it could be then piled together for loading on a wagon. Everyone knows what a rake is like, but how many ever saw a 'bull-rake'. As late as the 1920s, we saw one in use in a Vermont meadow, not one but several. Heavily framed, and with teeth over a foot long, pitched forward toward the operator, they often required two men to pull, and when loaded full of hay, they had to be lifted to be 'dumped' when one began again to pull it thru the hay to gather another load.

The tool which first replaced this hand drawn rake, was equally hard to use, but more efficient. Imagine a wooden beam, some 8' long, and about 4" square, with bevelled edges. Into this were set on opposite sides, two rows of wooden teeth, about 3' long, well polished and some what pointed, and an inch or more in diameter.

LILY SPECIES AND OLDER FORMS.

TALIENSE. We were delighted to find that this rather tall and quite rare lily from Western China grows and flowers well here. May stand 5', with strongly recurved white flowers, purple spotted. Very fragrant and often has 10-12 blooms in July. Useful in hybridizing. \$2.50 each.

TIGRINUM FLAVIFLORUM. The true Yellow Tiger. Is being used largely at present in hybridizing. Like the well known form, save in color, and it will set seed. Flowers in August and carries the usual bulbils. Not plentiful. \$1.00 each.

TSINGTAUENSE. Upright persimmon orange flowers, lightly spotted garnet brown. Foliage in whorls on a sturdy stem, to 3'. This is an attractive species lily, which should be better known. It is different. July flowering. \$1.00 each.

WASHINGTONIANUM PURPUREUM. One of the loveliest native species from the Pacific Coast, the Mount Hood Lily, grows to 5' and in late June, it carries white trumpets, which turn to dark purple. These are not large, but they make a fine head. Grows well here. \$3.50 each.

WILSONI FLAVUM. Now recognized as a species from Japan, this was first known as Marlyn Ross. It is a late flowering, upright sort, often to 3', with mimosa yellow blooms late in July and into August. A soft colored sort for hot days. \$1.00 each.

NATIVE PLANTS AND FERNS.

There are a number of native plants which blossom very early and are best planted in fall as are Orchids and Trilliums. They mostly make bulbs or tubers, and are dormant at this time.

ANEMONE QUINQUEFOLIA. The native Windflower has a fleshy root which lies just under the surface in open woodland. It grows but a few inches high, and when happy it carpets large area white or pinkish flowers in earliest spring.

ANEMONELLA THALICTROIDES. The Rue Anemone, tho similar to the Wood Anemone, bears its flowers in clusters. Dahlia like roots.

ARISAEMA TRIPHYLLUM. Jack-in-the-Pulpit needs little introduction. Its fleshy bulbous root is best planted in fall.

CLAYTONIA VIRGINICA. Earliest of our woods flowers, the Spring Beauty grows from a clay colored tuber, a half inch wide and flattened. Just under the surface, in decayed leaves.

CORYDALIS BULBOSA. This is not native, but it now has spread widely here. In full sun, it appears very early, makes a fine tuft of attractive foliage, shows purple flowers like those of the Squirrel Corn, then disappears. TRY FIVE FOR A DOLLAR.

DICENTRA CANADENSIS. Squirrel Corn. Tiny yellow bulbs or corms. Yellow white flowers in earliest spring.

D. CUCULLARIA. Dutchmen's Breeches. Loved by children, this is much like the preceding. The bulb is a cluster of tiny flakes.

MEDEOLA VIRGINICA. Grows from a small white root to stand a foot or more high. Attractive foliage, yellow white flowers.

SANGUINARIA CANADENSIS. Bloodroot's large white flowers over beautiful foliage, appear in May, along damp roadsides.

EXCEPT AS NOTED, THE ABOVE ALL 35¢ each; 10 (alike), \$3.00.

The prices on our plants do not include delivery charges. Please add postage to your order, we will refund the excess. If you prefer we will ship by railway express. On Orders of \$5.00 or less add 10% handling.

NATIVE FERNS.

With but few exceptions, our Native Ferns are found in shade which makes them useful for planting such areas about the home. But they are interesting in themselves, and may be used as specimens in the Rockery, or the Border. Generally of easy culture in any moderately damp soil, a few preferring dryer conditions.

ALL AT 50¢ EACH; 10 FOR \$4.50; -EXCEPT AS NOTED.

ADIANTUM PEDATUM. Maidenhair has slender brown-black stems and spreading heads of small round pinnules. Likes damp shade.

ASPIDIUM BOOTTII. A rare Shield Fern, delicate and partly evergreen, to 3', from shaded swamps, but easy in damp soil.

A. CRISTATUM. One of our handsomest evergreen ferns, to 2', very sturdy and rich looking. From moist woodland, partial shade.

A. - CLINTONIANUM. Clinton's Wood Fern is similar, but in every way larger. It is rare but of easy cultivation.

A. FILIX-MAS. Male Fern. Resembles the Marginal Fern, but is not evergreen. Very rare in comparison to other Shield Ferns. \$1.

A. GOLDIANUM. Magnificent. Largest of the Wood Ferns. To 4' and a foot wide frond. Easily cultivated in shade. \$1.00 each.

A. MARGINALE. Evergreen Wood Fern, of easy culture. To 3' but is usually less. For Rockery, or any shaded spot.

A. NOVEBORACENSE. New York Fern. Common in rather dry woodland. Odorous when crushed. Fronds taper each way from center.

A. SPINULOSUM. Toothed Wood Fern. Evergreen. Grows to about 30" and is of easy culture, anywhere in shade. Filmy foliage.

A. - DILATATUM. A form of the preceding from higher elevations. One of the loveliest, but needs a cool spot, in shade. \$1.00 ea.

A. THELYPTERIS. Marsh Fern. Despite its name, will grow in dry soil if shaded, or in full sun if damp.

ASPLENIUM ACROSTICHOIDES. The Silvery Spleenwort also tapers each way from the center, but less markedly than the New York Fern. A beautiful filmy sort, from rich woods and moist banks.

A. ANGUSTIFOLIUM. Narrow-leaf Spleenwort. A rare and beautiful fern to 4' if on rich woodland banks, with moisture. Different.

A. FILIX-FEMINA. The Lady Fern is extremely variable. It is common to open woodland, easily cultivated, Lacy and delicate, to 30".

A. PLATYNEURON. Ebony Spleenwort is a small, rigidly upright fern to 18" at most. Dark stems, with inch long pinnae. Moist banks and shaded ledges, sometimes quite dry. For the Rockery.

A. TRICHOMANES. Maidenhair Spleenwort is a tiny gem for the Rockery. A tuft of dark stems, with rounded pinnae, to 8" at most. In dense shade on ledges, but grows well in soil.

CAMPTOSAURUS RHIZOPHYLLUS. Walking-leaf Fern is one of the best for the shaded Rockery. Slender evergreen fronds are tapering and the tip roots down to form a new plant. Carpets limestone boulders and ledges, in dense shade. Never common. 75¢ each.

CYSTOPTERIS BULBIFERA. Bulblet Bladder Ferns usually grow in crevices of ledges, in partial shade. Always drooping, but fine and graceful, it grows readily in damp soil. Increases from the bulblets which drop from the fronds and take root.

C. FRAGILIS. Common Bladder Fern. Earliest to start growth in spring and like the preceding often disappears in August. It may then grow up again with fall rains. Smaller.

DICKSONIA PUNCTILOBULA. Hayscented Fern. Common to open upland fields, a very attractive filmy sort. Useful for holding dry banks in sun or shade. Fragrant when crushed, or drying.

Of men and machinery, -con.

At two spots in this bar, equidistant from its ends, were formed smaller, round bearings, over which fitted an arched wooden piece with a flat metal band going around the bar, permitting it to turn. These in turn were fastened to an 'evener', so that a team of horses could be attached to the unwieldy contraption, which could easily have weighed two hundred pounds. In use, this lay flat on the ground, one set of teeth pointing forward, and the other back toward the driver of the team which was attached to it. Pulled forward, it quickly filled with hay, when the operator bent over, grasped a tooth, and lifted. If done quickly and properly, and the soil was not too hard, the forward teeth would catch in the soil and tip the thing over, dumping the hay in the process, and ready to move on for another load. If it did not catch, it grew heavier and heavier, and must be pitched over by brute strength. A number of things helped make this machine a 'man killer'. If the horses were fresh, and a light active pair, just walking behind it would wear a man down. And if they were old and wise, they would have learned to time the lift, and when they felt the teeth catch, they would stop, letting the tines back on ones foot, or if really unlucky, to rake along ones shin.

Also in use with this was the dump rake with metal tines, which could be drawn by a horse, and dumped--made to lift its teeth--by kicking a bar which would engage 'dogs' in notches in a wheel hub. Well as we remember the wooden rake described above, for we had a try at its use only to find that it did indeed, "separate the men from the boys", we cannot recall when the metal-toothed rake was not in use, but it was considered too light for the first raking, and was mostly employed for raking the 'scatterins', which with a sedate old horse was an ideal job for a boy. But later this rake was given a steel frame, and was drawn by two horses and used for raking the crop, even in a ten or twelve foot width, which unluckily was too wide to cross on the river bridge and was carried over length-wise, unless someone volunteered to drive it over with the wheels up on the wooden sides of the bridge, which covered the wooden trusses and kept them rotting. And about this time, the first side delivery rake made it's appearance, mostly wood and always breaking, so that on occasion all of the forementioned rakes were brought back into use, well up to the period of the first World War. Is it any wonder that one sang, "How you gonna keep 'em, down on the farm".

NATIVE FERNS.

Of men and machinery, -con.

The aging grandfather considered the side delivery rake his especial tool, and using it he carefully raked as close to every fence as was necessary, since he had already seen to it that the hay he could not get had been 'thrown out', either with the hand rake, or the fork, so that it could be gotten. And a scrap left on the field after picking up the hay, meant that the boy on the dump rake would be sent after it if he did not get it when raking the small amounts left from 'tumbling' the windrows and 'pitching them on'. Machinery was now becoming important in the haying operation but was not all-important, and hay was still 'tumbled' into forkfuls that could be put on to a wagon by two men one each side of a wagon, and each trying to give the man on the load more hay than he could handle, which he in turn repaid by 'burying them up' when he got into the barn to unload in a mow. Of course, if rain threatened, instead of hastening to get what one could under cover, all hands turned to, and made 'hay-cocks', miniature stacks containing several 'tumbles', which theoretically shed rain, but which in practice must generally be taken apart and shaken out, and often again tumbled, just as another summer shower was imminent. Later, in another state, we were to learn of 'salting' the hay, -just that literally-, to keep moist hay from spoiling in the barn. Worthwhile or not, we do not know.

Better days were imminent, for the next tool gradually to come into general use, was the hayloader. But with its use, came the first evidence of the lowered standards of performance about which we have complained. For the man on the load, who took pride in building that structure carefully, and square, so that it would 'ride' safely to the barn, and draw no ribald remarks, now was replaced by two men, whose main endeavor was to stay on top of the endless stream of hay delivered to them by the endless ropes and cleats of the loader. Instead of a fine, square, and heavy load, anything that would stay in place until it reached the barn was satisfactory, for there it was to be unloaded by another new contraption, the 'hay-fork'. This in several forms was used to pull the hay from the load, by horsepower, thru ropes over pulleys, and in time by carriages over tracks in the roof of the barn, and it wasn't important that the men who loaded, couldn't find a single loose forkful. The hurry-up began, and persists to this day. Easier of course, on everyone, the men, the horses, and the farm wives who had to feed the haying-crew. All the same, something has been lost.

LYGODIUM PALMATUM. Hartford or Climbing Fern. This rare fern is now found in one spot in Vermont. We obtain it from another section. May grow to 4', the slender stem winding thru small bushes, and we have seen it trained on rough cord. It is different and attractive, in partial shade. \$1.00 each.

ONOCLEA STRUTHIOPTERIS. Ostrich Fern. One of the best of the larger rather coarse ferns. May grow to 4', in a regular vase shape. Found on river banks, and in moist soil with shade. Useful about the home, and of easy culture.

OSMUNDA CINNAMOMEA. The Osmundas are ferns of swamps and wet woodland, often growing to 6'. Not as tall on dry soils. All forms thrive in partial shade about the home. 50¢ each.

O. CLAYTONIANA. The Interrupted Fern is much like the Cinnamon save that its fruiting pinnae are in the middle of a frond and wither early, giving the plant its name. 50¢ each.

O. REGALIS. Royal Fern. This differs markedly from the preceding and is hard to describe. Makes a royal clump, in damp ground, and with ample moisture may grow 6'. Otherwise, it is under 3'. Magnificent in partial shade. 50¢ each.

PELLAEA ATROPURPUREA. Found on limestone ledges in full sun or on stony soil in dry conditions, the Purple Cliff Brake will grow in a limy soil and be very beautiful as a Rockery plant. There are few roots. Plant it carefully.

PHEGopteris DRYopteris. Oak Fern. Charming small fern, to 8" high and 7" broadly triangular. Yellow green. Dry shade.

P. HEXAGONOPTERA. Broad Beech Fern. Not common, with a triangular frond, 7-12" wide at the base, and a foot high.

P. POLYPODIOIDES. Long Beech Fern. Common in open woodland, and on shaded banks. Grows to a foot and makes a strong colony but is not weedy. It is very green, -the greenest green!

POLYPODIUM VULGARE. A common little fern, the Polypody will quickly and easily carpet ledges and boulders in shade.

POLYSTICHUM ACROSTICHOIDES. The Christmas Fern is evergreen and is common in fairly moist soil, in shade. It may grow to 3', the commonly less. Makes a clump of attractive dark green.

P. BRAUNI. Brauns Holly Fern. The most beautiful native fern. It comes from cool woods at high elevations, but will grow well in partial shade with extra moisture as needed, and especially if among stones. The sturdy dark green fronds are often 2' long, and chaffy with brownish scales. \$1.00 each.

SCOLOPENDRIUM VULGARE, CRESTED FORMS. We have no wild type Hart's Tongue Fern, but we do manage to keep a few of the varied forms of the European sort, growing in pots in the greenhouse. Moderately hardy, they may be used as house plants if kept cool, but lose fronds toward spring. \$1.00 each.

WOODSIA ILVENSIS. Rusty Woodsia. One of the better small ferns for sun and dry conditions. Will stand slight shade. It is a tuft of short fronds, 6-10" tall, covered with a bristly chass. May often become a foot wide sod.

W. OBTUSA. Blunt-lobed Woodsia. More slender and longer than the preceding. Found on rocky banks and cliffs, in rather more shade. Attractive and easy, for the Rockery.

FERN NOMENCLATURE. We are well aware that nearly all Ferns have a number of different names, depending on which authority is consulted. For convenience we use the one we first learned, and you may disagree if you wish.

RARE NATIVE PLANTS.

CYPRIPEDIUM ACAULE. Moccasin Flower. Native to both damp bogs and dry pine land. Lovely deep rose flower. Per strong bud, 60¢
C.CANDIDUM. White Ladyslipper. We are delighted to be able to offer this rare Orchid in nursery grown plants, and in good numbers. The flower is almost pure white, about the size of the Small Yellow Ladyslipper. It appears to be happiest on a marl soil, or one with a little limestone in it. Can be supplied in single bud plants, and in heavy clumps at \$1.50 each.
C.PARVIFLORUM. Smaller Yellow Ladyslipper. Tiny yellow sac and long deep brown sepals. Easy in cool deep shade. 60¢ per bud.
C.PUBESCENS. Larger Yellow Ladyslipper. Lighter in color and twice as large as the preceding. Easy in open woodland, not too wet but not under Pines. 60¢ each per strong bud.
C.SPECTABILE (REGINAE). Showy Ladyslipper. Will grow to 2' or more in damp cool soils in shade. Avoid wet feet. Striking foliage and pink and white sac-like flowers, two inches or more long. Finest native orchid. 75¢ each, per strong bud.

HABENARIA CILIARIS. Yellow-Fringe Orchid. Lovely and fragrant in part shade and a sandy soil. Bright orange flowers in a tight spike on a foot high stem. From Carolina. 75¢ per bud.
H.FIMBRIATA. Large Purple-Fringe Orchid. Found in wet grassy meadows in the open, and may grow to 30". Fragrant spike of rich purple flowers in July. 60¢ each, per strong bud.
H.PSYCODES. Small Purple-Fringe Orchid. From grassy bogs and meadows, often in part shade. Like the preceding but smaller. Easy in damp shaded soil. 60¢ each, per strong bud.

ORCHIS SPECTABILIS. Showy Orchis. From moist open woodland, where it will make a large colony of flat green leaves. Stubby spikes of small pink flowers. 75¢ each per bud.

MERTENSIA VIRGINICA. The Virginia Cowslip, or Bluebell. This plant will give one of the loveliest May pictures. From an enlarged black root, it sends up large light green leaves in the earliest spring and then a spike of blue and pink pendant bells. By July it has ripened and disappeared. Plant it under shrubs, or the front of the border. Use it generously, you'll not regret it. 35¢ each; 10 for \$3.00.
M.VIRGINICA ALBA. The rare white form of the Virginia Cowslip slightly smaller in growth, but one of the loveliest white flowered plants we know. Obtainable almost nowhere else, and never plentiful. \$1.50 each.

SANGUINARIA CANADENSIS FLORE PLENA. We expect that we shall again have a fair number of buds of the Double Bloodroot. The extremely double pure white flower is remarkably perfect and very lovely. In bloom a long time. \$1.50 each bud.

TRILLIUM CERNUUM. The Nodding Trillium is native to dry soils and pine lands. Pendant white flowers an inch across. May.
T.ERECTUM. The Wake Robin or Purple Trillium is found in open dry woodland, seldom under pines. Very early and striking.
T.ERECTUM ALBUM. White form of the Wake Robin, from Carolina.
T.GRANDIFLORUM. The Giant White Trillium carpets acres of wet woodland, and is sometimes seen by the millions, an unforgettable sight. Will stand more than a foot high with a 3" wide white flower which fades to pink as it ages. Plant it in the front of the border, amongst the Mertensia. Easy to grow.

T.SESSILE. Odd purple or green flowers held erect above the attractively mottled and spotted foliage.
T.SESSILE LUTEUM. A yellow flowered form quite rare and unusual.
T.STYLOSUM. The Rose Trillium from the Carolina Mountains. Next to our Giant White Trillium in beauty and very hardy here. Drooping rose pink flowers above the foliage on a short stems
T.UNDULATUM. Painted Trillium. White flowers, blotched with red in the throat, from deep cool woods, but easy in the border.

ALL TRILLIUM ARE PRICED AT 35¢ EACH; 10 (alike), FOR \$3.00.

Of men and machinery, -con.

For suddenly there was power. Not just the unwieldy power of three horses hitched abreast, or two in front of two, or even the first steam or gasoline powered tractors, with six foot drive wheels. And with small, quick tractors, and power take-offs, and with the need for more and more machinery as men to work the fields became more and more scarce, came the tractor rake lifted to be transported from field to field, to follow the high speed mower, with greater cutting width, and the crimper whose use has already been mentioned. And at first the field press, whose early models needed men riding on either side to fasten the ties about the bales, but now uses twine and but one man, and speeds over the fields at incredible speeds, spewing out bales, which in turn are no longer put on a wagon by hand, but are elevated to it, or picked up by a machine on the side of the wagon as it is driven along, and thrown onto the rack. No one has to pitch them off, nor put them over ones head. Instead they are tipped off to a power driven elevator, at the barn, which carries them high into the barn as needed. It is still a hot and sometimes seedy process, but it is incredibly easier, -if everything works.

We have made no mention of other processes, such as the field chopper which can cut green hay, and load it in a wagon to be turned into silage, smelling to high heaven, but eaten with gusto by the cattle. Or can pick up dry hay, and load it into a tight wagon which is dumped by machinery to a blower which puts it into every nook and cranny of the barn. Nor of the efficient dryers, using electricity to blow heated air thru hay too damp to store without the danger of fire. But we must not drop the subject without mentioning that now an attempt is being made to turn hay directly into milk, without using the cow. This, it would seem, might be the ultimate step in mechanization.

If you wonder why all this space has been devoted to a description of hay harvesting in a publication devoted to gardening, let us just say that first of all it is because there are not too many now who have seen the process almost from its primary form. And it is also an attempt to praise a little bit the theory of work for works own sake. Certainly we would not wish to go back to the days of willow forks. But the men who used them took pride in what they did. It was not enough that the man on the load could find his well placed forkfuls readily so that with luck he could 'bury-up' the man in the mow. He must be able to load so well that if necessary someone else knowing his method could also unload quickly. And that load could be drawn for miles without losing a forkful.

Of men and machinery,-con.

But is this after all, so very important, you may ask. We think it is. We feel that whatever man does is important to do well. If he runs a lathe, and forms a part, he must work to a standard expressed in thousandths of an inch. The seamstress who shapes a garment must take care that her work is well done, so that it will not be rejected by the Inspector. And the office worker must be certain that his records are accurate, else the whole matter being planned may not work out as expected.

But if one digs in the dirt, or harvests hay, must he still work to high standards? Why not? Granted these are not things that can be measured in thousandths, nor can one say that careless digging may result in a lack of flowers. On the other hand, when work is well done, is not one's personal satisfaction of some value, - to say nothing of growing the best lily in the Show? And if your lawn is carelessly clipped, do you ever think what your neighbor must be thinking. This is exactly the same goad that made a scalp-lock left in a meadow so unbearable to our grandfathers.

We here at Gardenside do use all the machinery that we can. Hand-forking of beds has given way to rotary tillage, which is actually better. We are using some of the new herbicides and we spray and feed with precision to control insects and get better growth. But we still grow our plants in beds and transplant everything we sell at least once. In the beds, the rows are kept as straight as possible, so that each plant has an equal amount of space. But more than that, the workman shows pride in his work, and the result is so marked that when once we took a prominent horticulturist out to see some new lilies, we found him instead standing and gazing at a newly planted bed of seedlings about which he said, "This is nice, - so nice it reminds me of Holland".

In the greenhouses, visitors often comment on the neatness and clean culture. We know, of course, that this is primarily just good business, for weeds bring insects and dirt is a potential source of re-infection of sterilized beds. On the other hand why must one paw over piles of pots, to find the needed size, or spend time hunting the tool which could so easily be put back where it belongs, ready for the next person who needs it.

Best of all, it gives us more than a feeling of pride when these facts are mentioned. It also gives us an opportunity to BLOW OUR OWN HORN.

PYRETHRUM, OR PAINTED DAISIES.

We have recently divided and reset our entire stock of named Pyrethrum. Because of the extremely hot and dry conditions of the past month, we cannot yet be certain what will be available for fall. We solicit your orders, but we reserve the right to hold shipment over until spring, or in case of loss, to refuse to supply at this time.

THE FOLLOWING ARE SINGLE FLOWERED, AT 60¢ EACH.

E.M. ROBINSON. A large soft rose pink flower with extra petals and a golden center. Extremely lovely.

GALT GIANT. A huge single red on non-branching stems. One bloom to a stem makes this fine for cutting.

HUNTINGTON'S SCARLET. Not so large as the preceding, and a darker flower. Many blooms on well branched stems.

MRS. BLISS. An unusual bright orange pink, unlike any other sort. Small flowers in profusion make it fine for massing.

RED PYGMY. Grows not over a foot high in a rounded mound of foliage. Starred with single bright red flowers on short stems.

THE FOLLOWING ARE DOUBLE FLOWERED, AT \$1.00 EACH.

BETTY. Lighter than most, this has lavender pink flowers, with a quilled lighter center. Branching, tall, and sturdy.

BUCKEYE. An old favorite and still excellent. Dark reddish pink, with a lighter center.

CHERRY GLOW. Similar to Buckeye, but slightly lighter and the well filled center shows more white.

DAINTY. Small, very double dark red flowers. The well filled center hides most of the outer petals.

GALT BEAUTY. Very large and double, this is lighter than Helen but similar. Very little branching, fine for cutting.

HELEN. An even rose pink, this fine variety has everything to commend it. Good size, easy culture, fine stem, perfect bloom.

JEAN. Very double with deep rose outer petals and a slightly lighter center. Vigorous and later flowering.

LADY PHYLLIS. Much like Rose Mist, perhaps larger. Deep rose with a lighter center on a branching stem.

LILLIE MORGAN. Much branched stems carry a lot of partly double white flowers. A stem is a bouquet. Airy and different.

LOUISE. One of our own, this resembles Helen but is lighter.

MRS. BECKWITH. The best double white. Early, and fine for cutting.

OLD ROSE. Deep rose pink, not red. Tufted, well filled center.

ROSE MIST. An old standby. Very double deep rose; lighter center.

SEASHELL. A very delicate and lovely soft shell pink, which grows easily and is permanent. Well branched stems.

UNUSUAL HARDY PLANTS.

CLEMATIS, LEMOINE'S HYBRIDS. Once upon a time we had three varieties of bushy upright Clematis, from this great French hybridist and nurseryman. All grew to some 3-4', with good foliage, and with tubular blue flowers in late summer and fall. In the garden, they can be used much as are Peonies, and they are hardy and attractive, giving blue at a time when it is lacking. They were called CAMPANILE; COTE D'AZUR; and OISEAU BLEU. Unfortunately, we lost the labels.

We think we still have all three, and are propagating them by number. But we can't tell which is which. We are offering them again as mixed, at \$1.25 each; 3 for \$3.00.

GENTIANA ACAULIS CLUSII. This lovely dark blue Alpine Gentian flowers in May, and when happy, it carpets the ground with its prostrate growth, from underground stems. The large blooms are stemless, over an inch long, and nearly an inch wide, with a yellow throat. Young plants only, but will flower next spring. Likes a bit of shade, and a cool soil. \$1.00 ea.

PHLOX DIVARICATA. These May flowering Phlox grow to about a foot of height, spread rapidly to cover the ground, and after flowering may be cut down, when the foliage is a good green all summer. Commonly blue, we offer two named forms.

SNOWFLAKE. A very fine pure white form, the petals wide and overlapping. Strong young plants, 50¢ each; 3 for \$1.25.

SPRING SKIES. Lovely soft blue form, somewhat taller and stronger than Snowflake. Prices same. (NOTE, 3 must be alike.)

VIOLAS. The Bedding Violas differ from Pansies, in that they are truly perennial, and are grown from cuttings or divisions, rather than from seed. In this way fine forms can be kept indefinitely, and indeed many sorts still being grown abroad can trace their ancestry back a hundred years. They may be used for pure color masses, with the growth of an even height. And if divided annually, during the summer they can easily be kept. Large plants tend to rot at the center over winter. Best of all, they are much more likely to flower well into hot weather than are Pansies, or even Violas from seed. We offer two fine sorts.

MAGGIE MOTT. The most famous English Bedding Viola, grown and loved for over 100 years. Soft lavender blue, fragrant, the blooms in early spring nearly 2" across.

ROYAL PURPLE. A strong growing, deep purple sort, found by us in a Quebec garden, at least thirty years ago. Fine foliage making mounds a foot or more across, and huge blooms on long stems, for picking.

WE OFFER EITHER FOR FALL ONLY AT A LOWER PRICE. Planted now they flower with the first spring blooms.

35¢ each; 10 for \$3.00; 25 or more (alike), 25¢ each.

THE MANAGER'S DESK.

The purpose of this column is to avoid so far as possible, any misunderstandings that are likely to arise in transactions between us, and I sincerely hope that you will read it, and will also believe that my greatest hope is that the plants and bulbs you buy from us will grow and flower for you, and give you pleasure. I must also stress that it is necessary for us to make a profit, else we cannot continue in business. Therefore the rules which follow.

WE CANNOT HANDLE SMALL ORDERS ECONOMICALLY. IF YOUR PURCHASES ARE FOR LESS THAN \$5.00, PLEASE ADD 10% TO YOUR REMITTANCE TO COVER EXTRA COSTS.

PLEASE ADD A MODERATE AMOUNT FOR POSTAGE. ON COMPLETION OF YOUR SHIPMENT, WE WILL REFUND ANY AMOUNT OVER 10¢, WHICH MAY BE DUE YOU. WE ALSO BILL AMOUNTS OVER 10¢, WHICH MAY BE DUE US, AND ASK THAT YOU REMIT THEM PROMPTLY.

WE GUARANTEE ONLY SAFE ARRIVAL OF PLANTS AND CANNOT BE RESPONSIBLE IN ANY WAY FOR FAILURE TO GROW, LOSS FROM WINTER, OR OTHER CAUSES. WE DO GUARANTEE ALL PLANTS TO BE TRUE TO NAME AND WILL REPLACE ANY ERROR WITHOUT CHARGE.

If plants are received in poor condition, please plant them, and write us. If possible, we will immediately replace them, or if preferred we will issue a credit for the future. Cash refunds cannot be made. Oftentimes plants will grow, despite poor condition, but a prompt letter will register your claim.

Shipments to California, and other states that have inspection requirements at port of entry travel entirely at the purchasers risk. If refused entry, we do not refund.

Canadian shipments require a Permit to Import, to be had from Ottawa. There is also an extra charge of \$1.00, for the Special Vermont Inspection, required for entry.

Most shipments are sent SPECIAL HANDLING and often AIRPOST is justified to distant points, which can then be more lightly packed. Express is seldom satisfactory.

Gardenside Nurseries, Inc., Shelburne, Vt.

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